ORDER NO. AD8805099A3

Service Manual

Cassette Receiver

LW/MW/FM STEREO
DOUBLE CASSETTE RECEIVER

SA-X900L

Color

(K)...Black Type

Area

Color	**Area**
(K)	(XA).......Asia, Latin America, Middle Near East, Africa and Oceania.

Please use this manual together with the service manual for Model No. SA-X900L, Order No. AD8804002C2.

CHANGES

■REPLACEMENT PARTS LIST

Note: Mentioned in this parts list are only those parts different from Model No. SA-X900L for the destination (E) area. All other parts are the same as for Model No. SA-X900L for the destination (E) area.

Ref. No.	Change of Part No.		Part Name & Description	Remarks
	SA-X900L (E) ➡	**SA-X900L (XA)**		
COILS AND TRANSFORMERS				
T701 ⚠	SLT5M532	**SLT5M533**	POWER TRANSFORMER	
FUSES				
F1 ⚠	XBA2C06TB0	**XBA2C12TB0**	FUSE 250V, T1.2A	
F2 ⚠	——	**XBA2C06TB0**	FUSE 250V, T600mA	Addition
SWITCHES				
S702 ⚠	——	**ESE37263**	VOLTAGE SELECTOR	Addition
CABINET AND CHASSIS				
1 ⚠	SJA138-3	**RJA52YA-K**	POWER CORD	
2	SHR127	**SHR102**	SPACER, POWER CORD	
20	SGPF10B	**SGPF12A**	REAR PANEL	
57	SJF3062-16N	**SJF3062-21N**	TERMINAL PLATE	
62	SJF8035N-1	**SJF8402N**	TERMINAL	
76	——	**SJP9205-2Y**	SHORT PIN	Addition
ACCESSORIES				
A1	SSA270M	**SSA269M**	FM ANTENNA	
A4	SQFF28	**SQFF40**	INSTRUCTION BOOK	
A7	——	**SJP9215**	PLUG	Addition

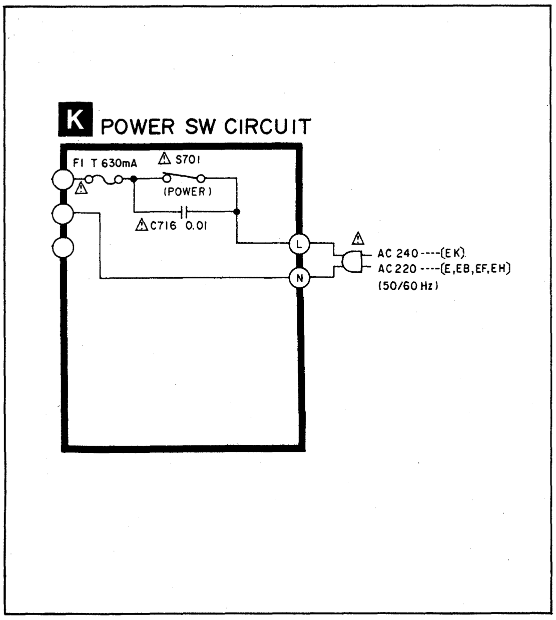
Technics

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

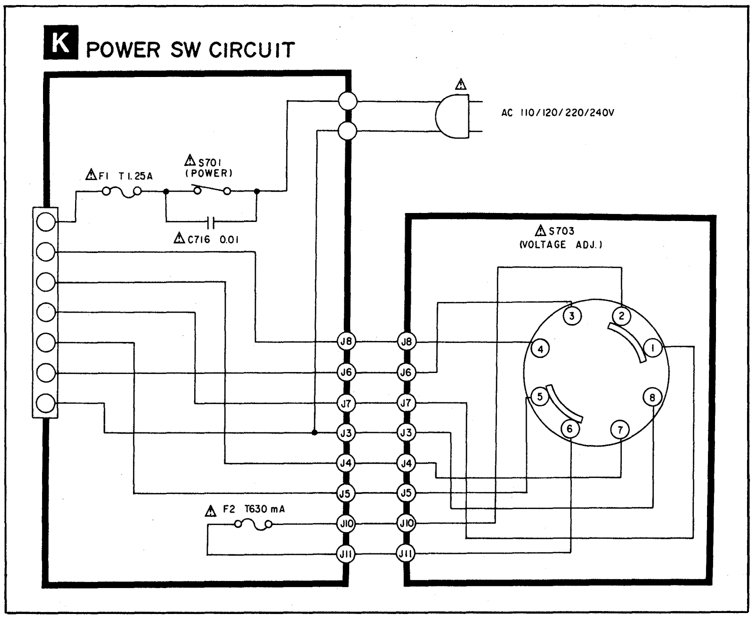
SCHEMATIC DIAGRAM

- **Power supply circuit**

(SA-X900L (E))


K POWER SW CIRCUIT
F1 T 630mA
⚠
⚠ S701
(POWER)
⚠ C716 0.01
L
N
⚠
AC 240----(EK)
AC 220----(E,EB,EF,EH)
(50/60 Hz)

(SA-X900L (XA))


K POWER SW CIRCUIT
⚠
AC 110/120/220/240V
⚠ F1 T1.25A
⚠ S701
(POWER)
⚠ C716 0.01
⚠ S703
(VOLTAGE ADJ.)
1
2
3
4
5
6
7
8
J8
J6
J7
J3
J4
J5
J10
J11
⚠ F2 T630 mA

Printed in Japan
H880501200 YY/TN

ORDER NO. AD8804002C2

Service Manual

Cassette Receiver

SA-X900L

LW/MW/FM STEREO DOUBLE CASSETTE RECEIVER

Color

(K)...Black Type

Color	Areas
(K)	(E)...........Continental Europe.
(K)	(EB).......Belgium.
(K)	(EF).......France.
(K)	(EK).......United Kingdom.
(K)	(EH).......Holland.

DOLBY SYSTEM

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

SPECIFICATIONS

■ AMPLIFIER SECTION

40Hz~16kHz continuous power output	
both channels driven	2×27W (THD 1%, 8Ω)
1kHz continuous power	
output both channels driven	2×30W (THD 1%, 8Ω)
Total harmonic	
distortion half power at 1kHz	0.05% (8Ω)
Power bandwidth	
both channels driven, −3dB	20Hz~40kHz (8Ω)
Damping factor	22 (8Ω)
Input sensitivity and impedance	
PHONO	2.5mV/47kΩ
AUX	150mV/22kΩ
CD	250mV/4.7kΩ
Frequency response	
PHONO	RIAA standard curve ±0.8dB (30Hz~15kHz)
CD	20Hz~50kHz (−3dB)
AUX	20Hz~50kHz (−3dB)
Tone controls	
BASS	50Hz, +10dB~−10dB
TREBLE	12.5kHz, +10dB~−10dB
Super bass	80Hz, +10dB
Load impedance	8Ω~16Ω

■ FM TUNER SECTION

Frequency range	87.50~108.00MHz (0.05MHz step)
Sensitivity	14.7dBf (1.5µV, IHF'58)
S/N 26dB	1.2µV (40Hz mod., 75Ω)
Total harmonic distortion	
1kHz MONO	0.15%
STEREO	0.3%
S/N	
MONO	70dB (78dB, IHF)
STEREO	65dB (71dB, IHF)
Frequency response	20Hz~15kHz, +0.5dB~−1.5dB
Image rejection at 98MHz	46dB
Stereo separation	
1kHz	40dB
10kHz	30dB
Antenna terminals	75Ω (unbalanced)

■ AM TUNER SECTION

Frequency range	
MW	522~1611kHz (9kHz step) 530~1620kHz (10kHz step)
LW	155~353kHz (9kHz step) 153~351kHz (−2kHz shift)
Sensitivity (S/N 20dB)	
MW	20µV, 300µV/m (999kHz)
LW	50µV/m (254kHz)
Selectivity	
MW	55dB (999kHz)
LW	55dB (254kHz)
Image rejection	
MW	40dB (999kHz)
LW	50dB (254kHz)

■ CASSETTE DECK SECTION

DECK system	Auto stop Double cassette system
Track system	4-track, 2-channel
Heads	
REC/PLAY (DECK A)	Solid Permaloy head
PLAY (DECK B)	Solid Permaloy head
Erasing (DECK A)	Double-gap ferrite head

Technics

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

Motors	DC servo motor
Recording system	AC bias, 100kHz
Erasing system	AC erase, 100kHz
Tape speed	4.8cm/sec. (1-7/8ips)
Frequency response	
CrO_2	30Hz~16kHz (DIN) 40Hz~15kHz, +3dB, −6dB
NORMAL	30Hz~15kHz (DIN) 40Hz~14kHz, +3dB, −6dB
S/N	(CrO_2 type tape)
DOLBY NR on	65dB (CCIR)
DOLBY NR off	56dB (A-WTD)
Wow and flutter	0.1% (WRMS)
Fast Forward and Rewind Time	Approx. 110 seconds with C-60 cassette tape

■ GENERAL

Power consumption	170W
Power supply	
For United Kingdom	AC 50Hz/60Hz, 240V
For others	AC 50Hz/60Hz, 220V
Dimensions (W × H × D)	360 × 292 × 308mm (14-3/16″ × 11-1/2″ × 12-1/8″)
Weight	7kg (15.4lb.)

Note:
Specifications are subject to change without notice.
Weight and dimensions are approximate.

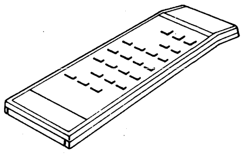
■ CONTENTS

Page
ACCESSORIES 2
CONNECTIONS 3
FRONT PANEL CONTROLS AND FUNCTIONS 4, 5
REMOTE-CONTROL TRANSMITTER (EUR64791)........... 6
PROTECTION CIRCUITRY 7
BEFORE REPAIR AND ADJUSTMENT .... 7~9
MEASUREMENTS AND ADJUSTMENTS .... 10~13
FUNCTION OF TERMINAL .... 14~18
RESISTORS & CAPACITORS .... 19~22
REPLACEMENT PARTS LIST .... 23~25
TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES 25
REPLACEMENT PARTS LIST 26

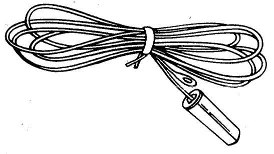
Page
MECHANICAL PARTS LOCATION 27, 28
SCHEMATIC DIAGRAM OF REMOTE-CONTROL TRANSMITTER 29
INTERNAL CONNECTION OF FL 30
PRINTED CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM 31, 32
PRINTED CIRCUIT BOARDS .... 33~37
BLOCK DIAGRAM .... 38~40
SCHEMATIC DIAGRAM .... 41~50
REPLACEMENT PARTS LIST 51
CABINET PARTS LOCATION .... 52~54
REPLACEMENT PARTS LIST 54

■ ACCESSORIES

- Remote-control transmitter 1
  (EUR64791)

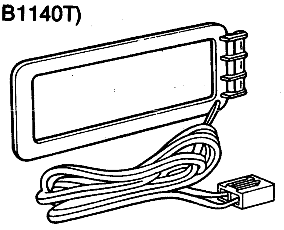


- FM indoor antenna............. 1
  (SSA270M)

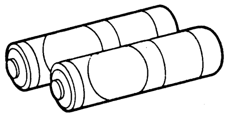


(For continental Europe)

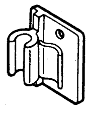
- AM loop antenna 1
  (SPB1140T)



- Batteries...................... 2
  (UM-4NE)



- AM antenna holder............. 1
  (SMA231M)



(XTN3+10AFZ)

CONNECTIONS

"PHONO" terminals

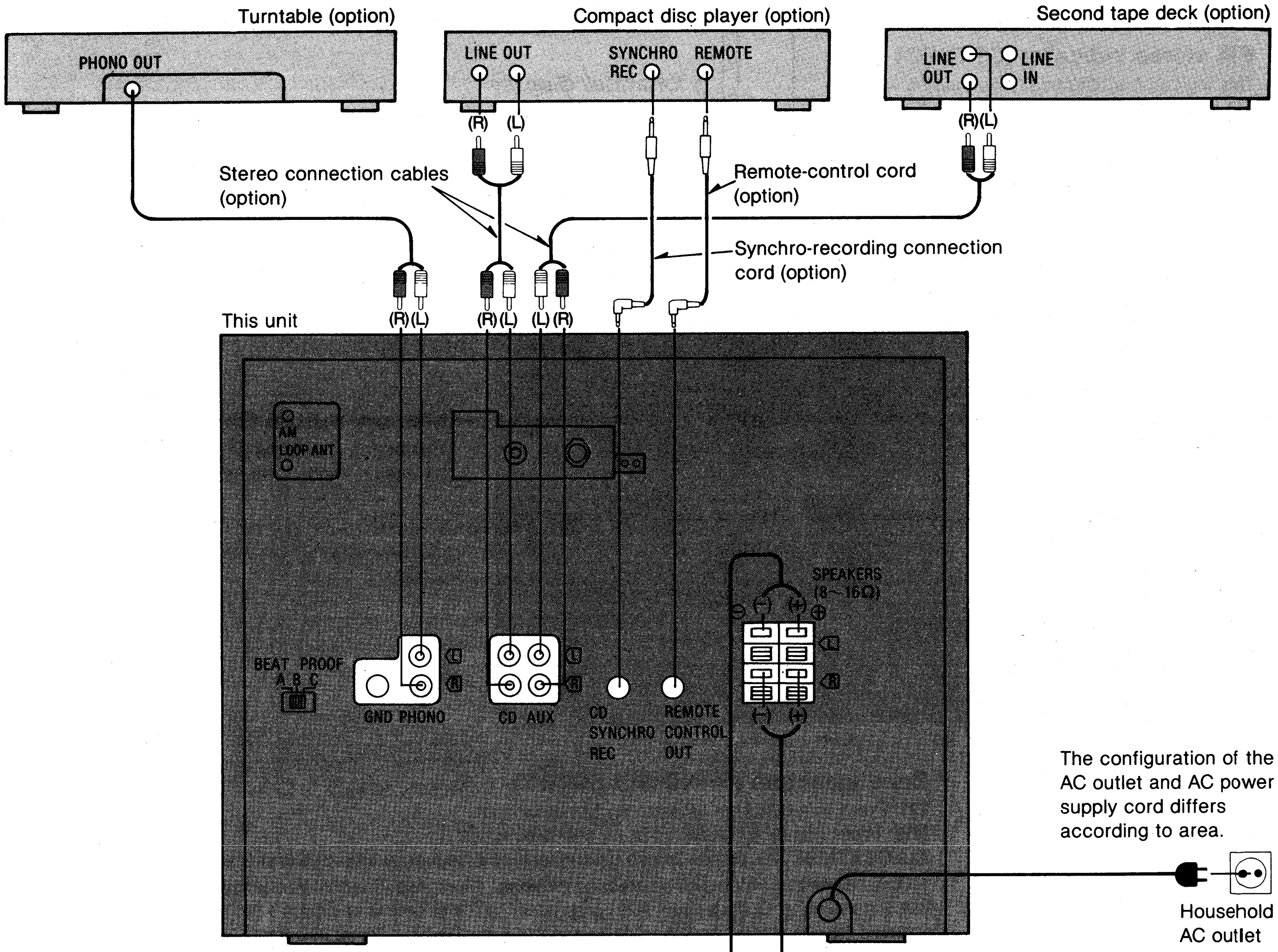
Connect a turntable.
For a turntable with a ground wire, be sure to connect the ground wire to the "GND" terminal of this unit.

"CD" terminals

Connect a compact disc player.
Note: Although the synchro-recording connection cord and the remote-control cord are differentiated in the figure below, actually they are the same shape.

"AUX" terminals

For connection of a second tape deck (for playback only), etc.


PHONO OUT
LINE OUT
SYNCHRO REC
REMOTE
(R) (L)
LINE OUT
LINE IN
(R)(L)
(R)(L)
(R)(L)
(L)(R)
AM LOOP ANT
BEAT PROOF A B C
GND PHONO
CD AUX
CD SYNCHRO REC
REMOTE CONTROL OUT
SPEAKERS (8~16Ω)
(−) (+)
L
R

Turntable (option)

Compact disc player (option)

Second tape deck (option)

Stereo connection cables (option)

Remote-control cord (option)

Synchro-recording connection cord (option)

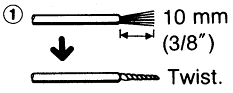
This unit

The configuration of the AC outlet and AC power supply cord differs according to area.

Household AC outlet

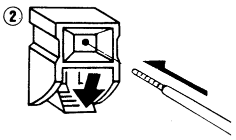
"SPEAKERS" terminals

① Twist the core of the connection cords.

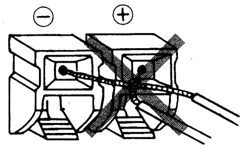

①
10 mm
(3/8")
Twist.

② Press the pushbutton, and insert the core until it can no longer be seen.

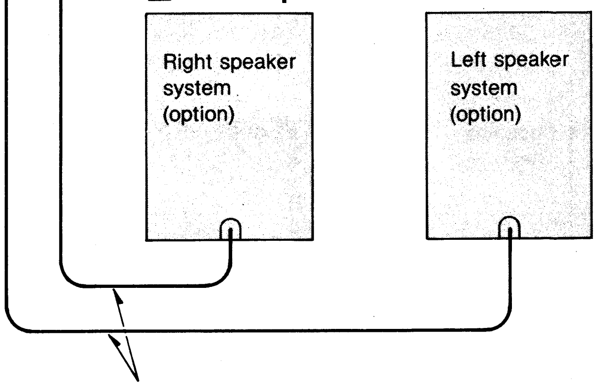
③ Release the pushbutton, and pull the cord gently to be sure that it is secure.



Note:
To prevent damage to circuitry, never short plus (+) and minus (−) speaker terminals.



Load impedance: 8~16 Ω


Right speaker system (option)
Left speaker system (option)

Be sure to connect the striped cord to the negative (−) terminal.

FRONT PANEL CONTROLS AND FUNCTIONS

Tuner section

The indication AM used here includes both MW and LW.

Digital frequency display

The reception frequency of the FM or AM broadcast selected by using the tuning buttons or the preset-tuning buttons is indicated by a digital-type display.

FM stereo indicator (STEREO)

This indicator automatically illuminates when an FM stereo broadcast is being received.

Memory indicator ($\boxed{M}$)

This indicator illuminates when the memory button is pressed.

Quartz-lock indicator (QUARTZ LOCK)

This indicator illuminates when tuned precisely to an FM or AM station.

Channel display

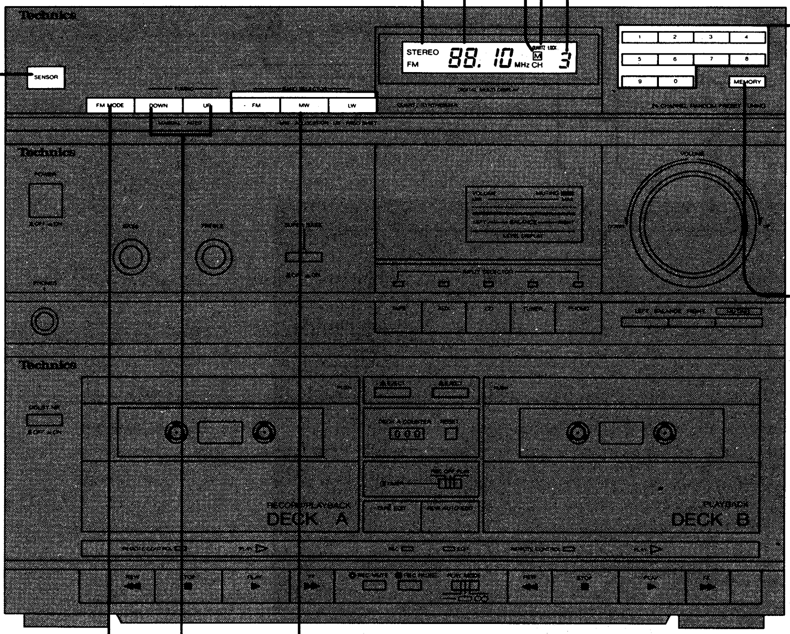
The channel number selected by the preset-tuning buttons is displayed.

Preset-tuning buttons (1-0)

These buttons are used to preset FM and AM broadcast frequencies into the memory of this unit, and are also pressed to select the desired preset frequencies.

Memory button (MEMORY)

This button is used when preset memory setting of the preset-tuning buttons is made.



Band selectors (BAND SELECTOR)

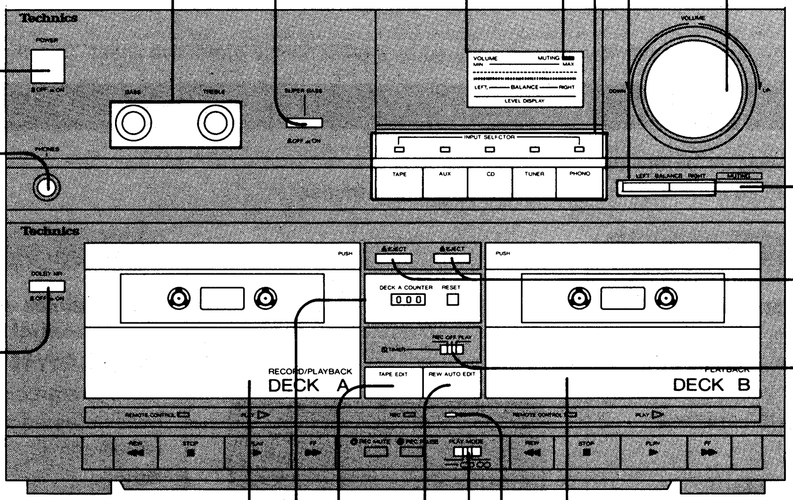
FM: Press this button to listen to an FM broadcast.
MW: Press this button to listen to an MW broadcast.
ALLOCATION: This button is also used to select a frequency step of either 9 kHz or 10 kHz. When the MW button is pressed for about 4 seconds, the MW frequency step will change to 10 kHz per step. (This step is set to 9 kHz before shipment.) Set to the appropriate position for your locality. In order to return to the original frequency indication, press this button for about 4 seconds again.
LW: Press this button to listen to an LW broadcast.
FREQ SHIFT: When the LW button is pressed for about 4 seconds during reception of an LW broadcast, the LW frequency will decrease by 2 kHz. So, for example, to receive 153 kHz, tune to 155 kHz, and then press this button. In order to return to the original frequency indication, press this button for about 4 seconds again.

Tuning buttons (TUNING)

FM mode selector (FM MODE)

Remote-control signal receptor (SENSOR)

Amplifier section


Technics
POWER
BASS
TREBLE
SUPER BASS
PHONES
VOLUME
MUTING
LEVEL DISPLAY
INPUT SELECTOR
TAPE
AUX
CD
TUNER
PHONO
LEFT BALANCE RIGHT
DOLBY NR
PUSH
EJECT
DECK A COUNTER
RESET
000
TIMER
TAPE EDIT
REW AUTO EDIT
RECORD/PLAYBACK
DECK A
PLAYBACK
DECK B
REMOTE CONTROL
PLAY
REW
STOP
FF
REC MUTE
REC PAUSE
PLAY MODE

Muting indicator (MUTING)

Input selectors/indicators (INPUT SELECTOR)
These selectors are used to select the sound source to be heard, such as a disc, radio broadcasts, etc. The corresponding input selector indicator illuminates during operation to indicate the selected sound source.

Volume/balance level indicators (VOLUME/BALANCE)
These indicators usually show the volume level; when the balance control is pressed, however, the position of balance level is displayed for five seconds, after which the display returns again to indication of the volume level.

Super bass switch (SUPER BASS)

Balance controls (BALANCE)

Tone controls (BASS/TREBLE)

Volume control (VOLUME)

Power switch (POWER)

Muting switch (MUTING)
Press this switch when a disc is being changed or to temporarily reduce the volume level (approx. 1/10).

Headphones jack (PHONES)

Cassette deck section

Eject buttons (▲ EJECT)

Dolby noise-reduction switch (DOLBY NR)

Timer stand-by switch (◷ TIMER)

Cassette holder
Be sure to press the upper side of the cassette holder (marked "PUSH") to close it.

Cassette holder

Editing mode indicator (EDIT)

"DECK A" counter/reset button (DECK A COUNTER/RESET)
This indicates the amount of tape travel of "DECK A". When this button is pressed, the readout will be reset to "000".

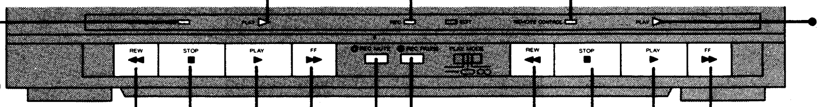
Playback mode selector (PLAY MODE)

Automatic rewind/edit-recording button (REW AUTO EDIT)
This button can be used to automatically rewind tapes to their beginning and then begin an edit-recording.

Edit-recording button (TAPE EDIT)
This button is used when an edit-recording is made.

When using "DECK A"

When using "DECK B"



Recording indicator (REC)

Remote-control signal indicator (REMOTE CONTROL)

Playback indicator (PLAY)

Remote-control signal indicator (REMOTE CONTROL)

Playback indicator (PLAY)

Rewind button (REW/◀◀)

Fast-forward button (FF/▶▶)

Stop button (STOP/■)

Playback button (PLAY/▶)

Playback button (PLAY/▶)

Fast-forward button (FF/▶▶)

Stop button (STOP/■)

Record-muting button (○ REC MUTE)

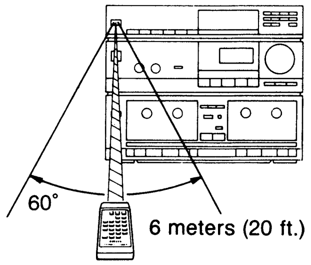
Recording pause button (● REC PAUSE)

Rewind button (REW/◀◀)

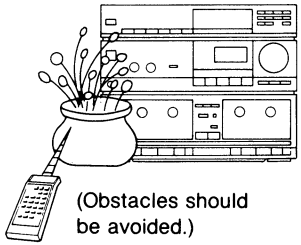
■ REMOTE-CONTROL TRANSMITTER (EUR64791)

Operation notes

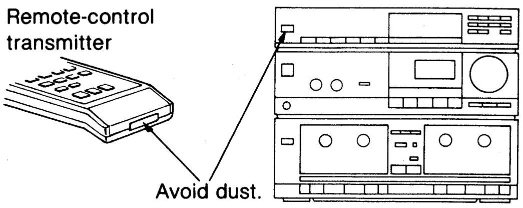
Use the remote-control transmitter within 6 meters.



Face the remote-control transmitter toward the remote-control signal receptor of this unit.



Be sure the transmitter part of the remote-control transmitter and the receptor part of this unit are free from dust. Excessive dust might prevent reception.



Note:
The control panel of the remote-control transmitter may be covered by a clear plastic protective sheet. This sheet may be removed if desired.

Operation

Be sure to turn the unit's power on before use.
Note that power can not be turned on and off by the remote-control transmitter.

While listening to music

Amplifier muting button (MUTING)

Press this button to temporarily reduce the volume level. The volume level is attenuated by 20 dB. (approx. 1/10)

Press once again to return to the previous volume level.

Amplifier volume controls (VOLUME/▼ DOWN • ▲ UP)

Adjust the volume level.
(The volume level is indicated by the volume/balance level indicators on this unit.)

Tuner controls

Tuner preset-tuning buttons

Press to select a preset "channel".

Cassette deck controls

"DECK A/B"

Press to select "DECK A" or "DECK B". (The remote-control indicator on this unit will illuminate.)

"▶ PLAY":

Press to playback or record.

"■ STOP":

Press to stop the tape.

"◀◀REW":

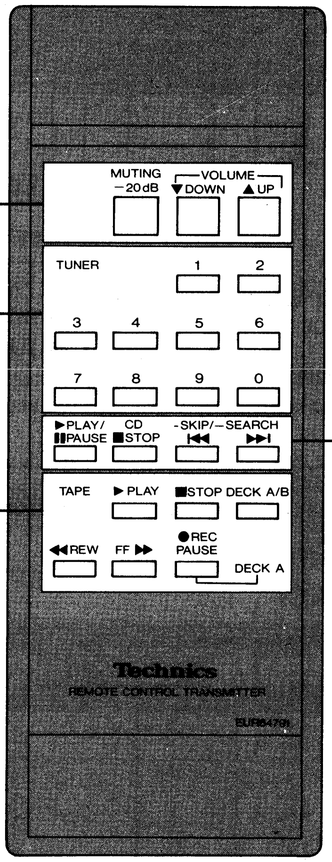
Press to rewind the tape.

"FF▶▶"

Press to advance the tape.

"● REC PAUSE": ("DECK A" only)

Press this button to record.
(When pressed during recording, the recording will stop temporarily.)



Compact disc player controls

(For Technics compact disc player with the remote-control terminals.)

"▶ PLAY/❚❚ PAUSE":

Press to start disc play.
(When pressed during disc play, the play will stop temporarily.)

Note:
If the compact disc player has separate "PLAY" and "PAUSE" buttons, the "PAUSE" function may not be operable.

"■ STOP":

Press to stop disc play.
(When pressed during programmed play, the programmed settings will be cancelled.)

"-SKIP/-SEARCH" (I◀◀/▶▶I):

Press to select the desired track.
I◀◀: for backward,
▶▶I: for forward
Keeping either "SKIP/SEARCH" button pressed during disc play activates search play.

Note:
If the compact disc player has separate "SKIP" and "SEARCH" buttons, the "SEARCH" function may not be operable.

(Refer to the operating instructions for the compact disc player.)

After listening is finished

Use the volume control to reduce the volume level so that the volume/balance level indicators illumination stops, and switch OFF the power.

Note:
The input selection, the volume level, the volume balance, the tone quality, and the muting settings will be kept as they were at the time when the power is switched OFF.

■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following condition is noticed:
- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlined below.
1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again.

Note:
When the protection circuitry functions, the unit will not operated unless the power is first turned off and then on again.

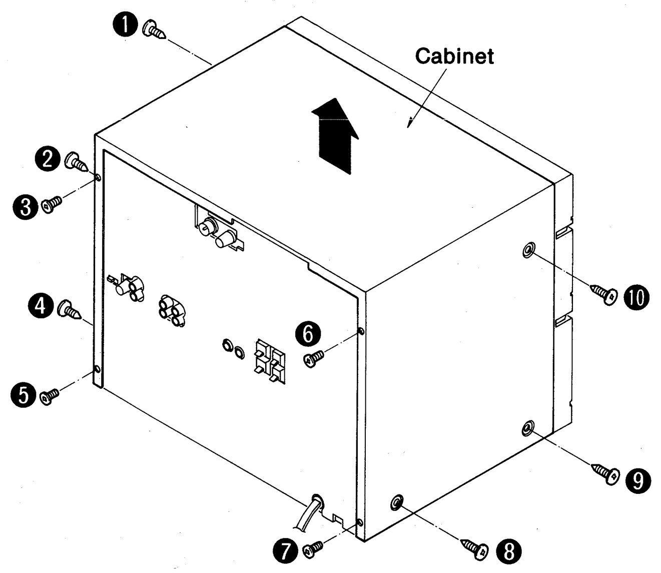
■ BEFORE REPAIR AND ADJUSTMENT

1. Turn off the power, Discharge both power supply capacitors (C701, C702 3300µF) through a 10Ω 5W resistor to ground. Do not short between C701 and C702. It may damage the capacitors.
2. After completion of repair, slowly apply the primary voltage by using a variac to avoid over current. Current consumption at 50Hz/60Hz in no signal mode should by shown with respect to supply voltage 220V/240V.

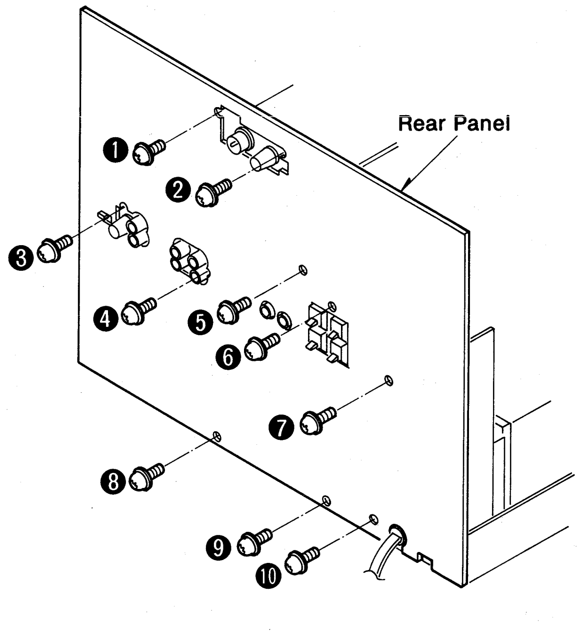
Power supply voltage		AC 220V	AC 240V
Consumed current	50/60Hz	70~170mA	55~155mA

■ DISASSEMBLY INSTRUCTIONS

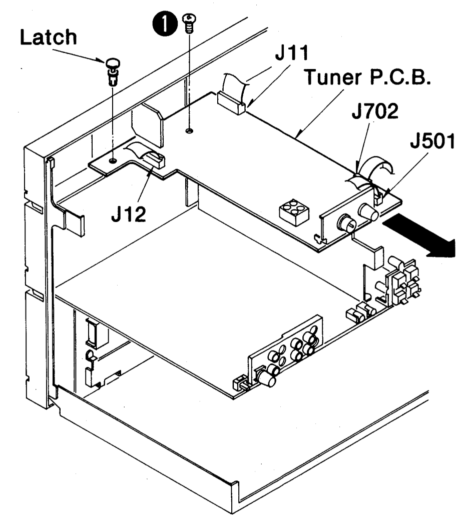
Ref. No. 1	How to remove the cabinet
Procedure 1	•Remove the 10 screws (①~⑩).


①
Cabinet
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩

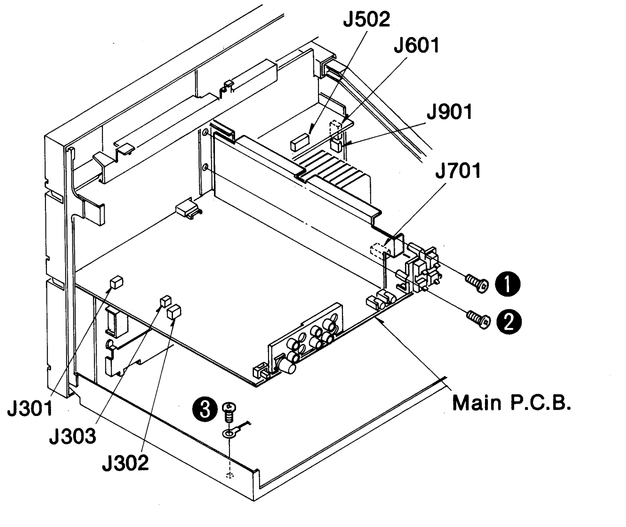
Ref. No. 2	How to remove the rear panel
Procedure 1→2	•Remove the 10 screws (①~⑩).


Rear Panel
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩

Ref. No. 3	How to remove the tuner P.C.B.
Procedure 1→2→3	•Remove the 1 screws (①). •Remove the 4 connectors (J11, J12, J501 and J702). •Remove the 1 latch.

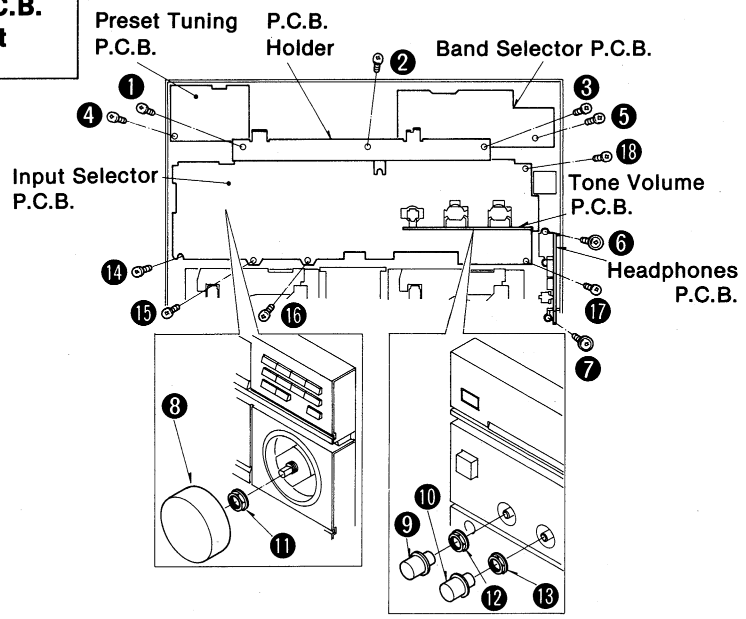

Latch
①
J11
Tuner P.C.B.
J702
J501
J12

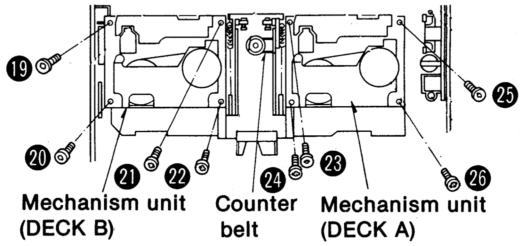
Ref. No. 4	How to remove the main P.C.B.
Procedure 1→2→4	•Remove the 3 screws (①~③). •Remove the 7 connectors (J301, J302, J303, J501, J601, J701 and J901).


J502
J601
J901
J701
①
②
J301
③
J303
J302
Main P.C.B.

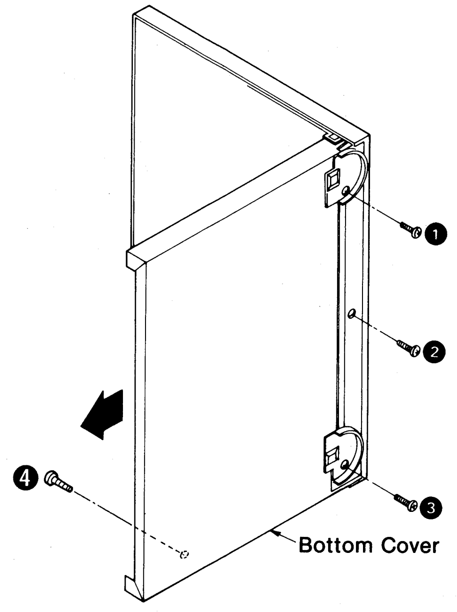
Ref. No. 5	How to remove the preset tuning P.C.B., band selector P.C.B., headphones/dolby NR SW P.C.B., tone volume P.C.B., input selector P.C.B. and mechanism (DECK A, B) unit
Procedure 1→2→3 →4→5	

1. How to remove the preset tuning P.C.B. and band selector P.C.B.
   - Remove the 3 screws (①~③), and then remove the P.C.B. holder.
   - Remove the 2 screws (④, ⑤).
2. How to remove the headphones/dolby NR SW P.C.B.
   - Remove the 2 screws (⑥, ⑦).
3. How to remove the tone VR P.C.B. and input selector P.C.B.
   - Remove the 3 knobs (⑧~⑩) and 3 nuts (⑪~⑬) from surface side, and then tone volume P.C.B. can be removed.
   - Remove the 5 screws (⑭~⑱), and then input selector P.C.B. can be removed.
4. How to remove the mechanism unit.
   - Push the Eject button.
   - Remove the counter belt.
   - Remove the 8 screws (⑲~㉖).

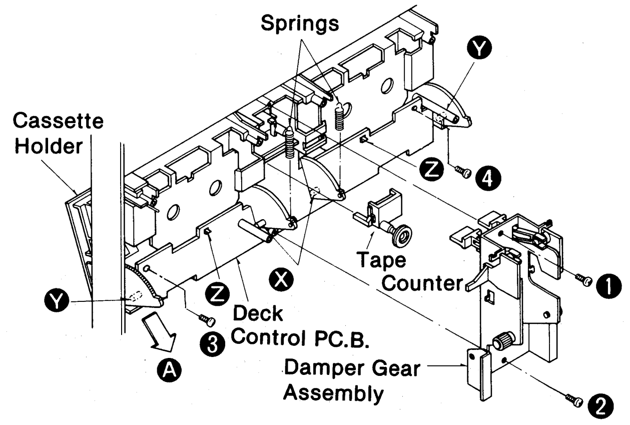

Preset Tuning P.C.B.
P.C.B. Holder
②
Band Selector P.C.B.
①
③
④
⑤
⑱
Input Selector P.C.B.
Tone Volume P.C.B.
⑥
Headphones P.C.B.
⑭
⑮
⑯
⑰
⑦
⑧
⑨
⑩
⑪
⑫
⑬


⑲
⑳
㉑
㉒
㉓
㉔
㉕
㉖
Mechanism unit (DECK B)
Counter belt
Mechanism unit (DECK A)

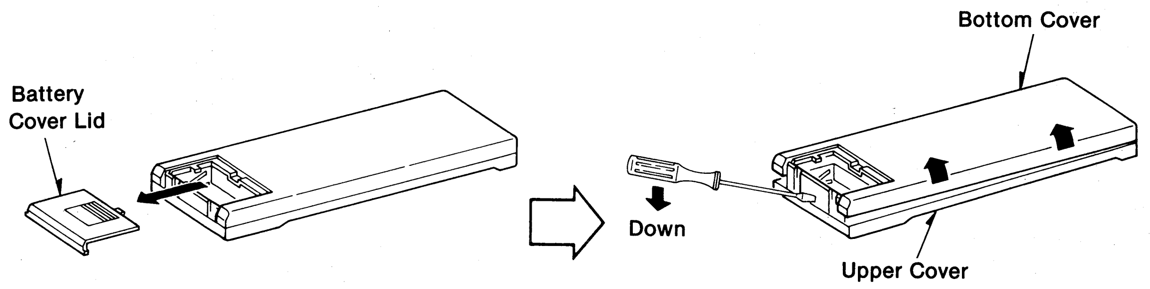
Ref. No. 6	How to remove the bottom cover
Procedure 1→2→6	• Remove the 4 screws (❶~❹). • Remove the 1 connector (J701) of main P.C.B. • Remove the 1 connector (J702) of Tuner P.C.B.


❶
❷
❸
❹
Bottom Cover

Ref. No. 7	How to remove the cassette holder and deck control P.C.B.
Procedure 1→2→3→4→5→7	• Remove the 2 springs. • Remove the 2 screws (❶, ❷). • Remove the 2 tabs (Ⓧ), and then remove the damper gear assembly. 1. How to remove the cassette holder • Remove the 2 tabs (Ⓨ), and then remove the cassette holder in the direction of allow (Ⓐ). 2. How to remove the deck control P.C.B. • Remove the 2 screws (❸, ❹). • Remove the 2 tabs (Ⓩ).


Springs
Ⓨ
Cassette Holder
Ⓩ
❹
Tape Counter
❶
Ⓧ
Ⓨ
Ⓩ
Deck Control PC.B.
❸
Damper Gear Assembly
Ⓐ
❷

Ref. No. 8	How to remove the remote control
Procedure 8	• Remove the Battery cover lid. • Insert a screwdriver blade between the upper and lower covers inside the battery compartment and them slowly loosen the bottom cover.


Battery Cover Lid
Down
Bottom Cover
Upper Cover

■ MEASUREMENTS AND ADJUSTMENTS

• LW/MW/FM

Control positions and equipment used

- AM and FM signal generator (AM and FM-SG)
- Stereo modulator
- Distortion analyser
- Oscilloscope
- AC and DC electronic voltmeter (EVM)
- Frequency counter
- Choke coil (100μH)
- Resistor (100kΩ)
- Ceramic capacitor (200pF)
- AM dummy antenna

Note: For **Z202** (MW IFT) and **Z251** (MW ANT/MW OSC/LW ANT/LW OSC coil), adjusted parts are supplied. So, do not turn the cores of this parts.

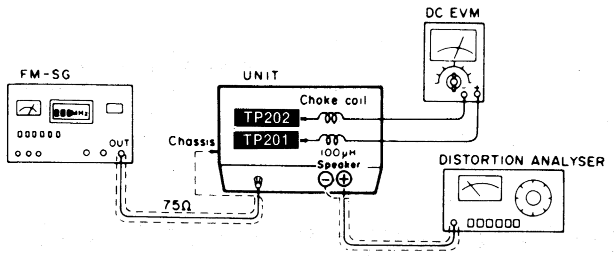
FM MONO DISTORTION ADJUSTMENT

1. Test equipment connection is shown in the figure.
2. Set the unit to **"FM"** position.
3. Place the radio frequency display and signal generator setting to **100.10MHz.**
4. Adjust **T202** core so that voltage measured in signal mode is **0mV** (0±30mV) in 300mV range.
5. Adjust **T201** so that the distortion factor of Lch is minimized.
6. Repeat steps 4 and 5 a few times.
7. Make sure that the distortion factors of Lch and Rch are nearly the same with each other to minimum.

Note:

The adjusting screwdriver used should be made of resin.

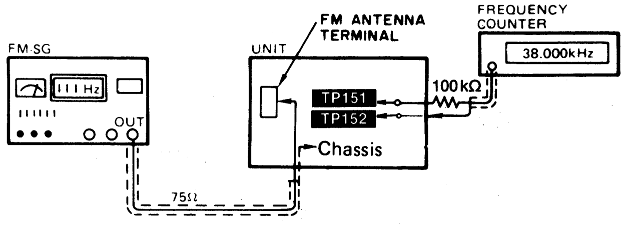
FM SIGNAL GENERATOR CONDITION
Modulation.......................... 100%
Modulation frequency.......... 1kHz
Output level......................... 66dB


DC EVM
FM-SG
UNIT
Choke coil
TP202
TP201
Chassis
100μH
Speaker
OUT
75Ω
DISTORTION ANALYSER

MPX VCO ADJUSTMENT

1. Test equipment connection is shown in the figure.
2. Set the unit to **"FM auto"** position.
3. Place the radio frequency display and signal generator setting to **100.10MHz.**
4. Adjust **VR151** for **19kHz±0.05kHz** on frequency counter reading.

FM SIGNAL GENERATOR CONDITION
Modulation . . . . 0% (non-modulation)
Output level 66dB


FM ANTENNA TERMINAL
FREQUENCY COUNTER
38.000kHz
FM-SG
UNIT
111 Hz
OUT
100kΩ
TP151
TP152
Chassis
75Ω

• CASSETTE

MEASUREMENT CONDITION:

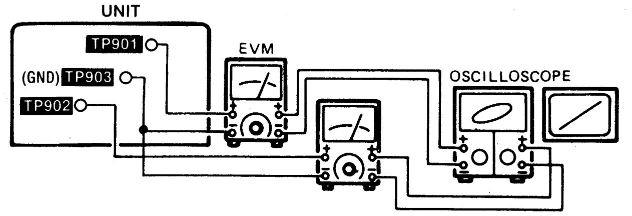
- Make sure heads are clean.
- Make sure capstan and pressure roller are clean.
- Make sure beat-proof switch is **"A"**.
- DOLBY NR SW: **"OFF"**.

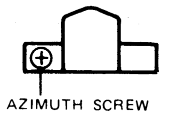
TEST TAPE:

- Head azimuth adjustment (8kHz, −20dB): QZZCFM
- Tape speed adjustment (3kHz, −10dB): QZZCWAT
- Normal reference blank: QZZCRA
- CrO_2 reference blank: QZZCRX

HEAD AZIMUTH ADJUSTMENT (DECK A/B)

1. Test equipment connection is shown in the figure.
2. Playback the azimuth adjusted part (8kHz, −20dB) of the test tape (QZZCFM) and regulate the angle adjusting screw so that the outputs of L-CH and R-CH are maximized. (When the adjusting positions are different with L-CH and R-CH, find a position where are the outputs of L-CH and R-CH are balanced, and then mark the adjustment.)
3. At the same time, draw a lissajous waveform and eliminate phase deflection.
4. After the adjustment, apply screw-lock to the angle adjusting screw.


UNIT
TP901
(GND) TP903
TP902
EVM
OSCILLOSCOPE


AZIMUTH SCREW

TAPE SPEED ADJUSTMENT (DECK A/B)

(DECK A)

1. Test equipment connection is shown in the figure.
2. Place unit in the **"TAPE"** position.
3. Playback the middle part of the test tape (QZZCWAT).
4. Adjust VR in the motor so that the output frequency is within the standard value.

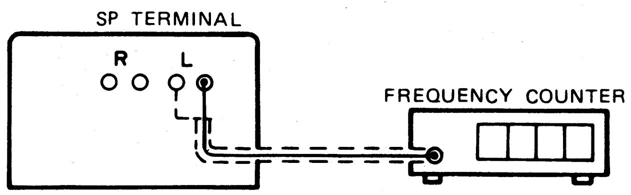
Standard value: 3000±20Hz

(DECK B)

5. Playback the middle part of the test tape (QZZCWAT).
6. Adjust VR in the motor so that the output frequency is within the standard value.

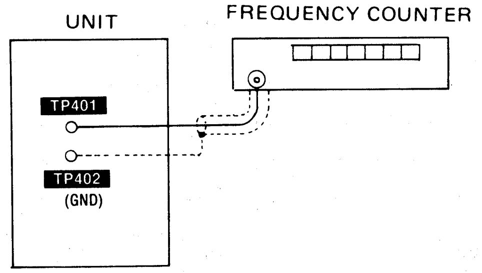
Standard value: 3000±45Hz

7. Confirm that the difference between DECK A and DECK B is within **±30Hz**.


SP TERMINAL
R
L
FREQUENCY COUNTER

BIAS OSCILLATION ADJUSTMENT (DECK A)

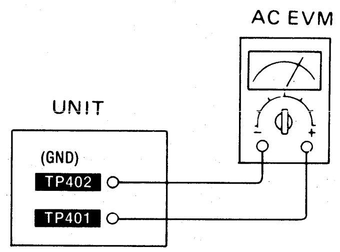
1. Test equipment connection is shown in the figure.
2. Place the unit in the **"TAPE"** position.
3. Place the cassette deck in the **REC** mode. (QZZCRA)
4. Adjust **L401** to read **95~103kHz** on the frequency counter.
5. Change the beat-proof switch to the **"B"** position.
6. Confirm that the frequency is **−2.5~−5.0kHz** lower than the frequency in the **"A"** position.
7. Change the beat-proof switch to the **"C"** position.
8. Confirm that the frequency is **−5~−10kHz** lower than the frequency in the **"A"** position.


UNIT
FREQUENCY COUNTER
TP401
TP402
(GND)

ERASE CURRENT ADJUSTMENT (DECK A)

1. Test equipment connection is shown in the figure.
2. Place the unit in the **"TAPE"** position.
3. Place the cassette deck in the **REC** mode. (QZZCRA)
4. Adjust **VR403** to read **70±5mV** on the AC Electronic Voltmeter. (AC EVM)

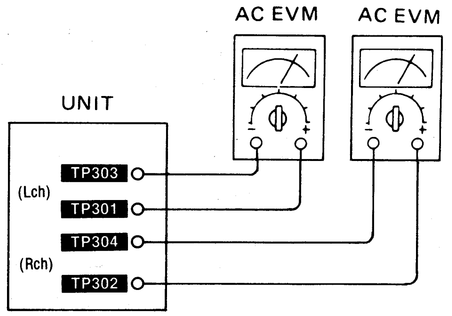
Standard value: Normal tape More than **70±5mV**
CrO_2 tape More than **80mV**


AC EVM
UNIT
(GND)
TP402
TP401

RECORDING BIAS ADJUSTMENT (DECK A)

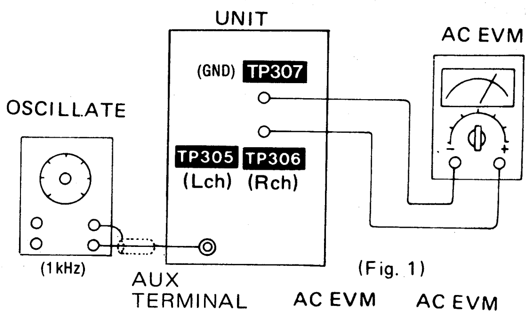
1. Test equipment connection is shown in the figure.
2. Place the unit in the **"TAPE"** position.
3. Place the cassette deck in the **REC** mode. (QZZCRA)
4. Adjust **VR307** (Lch) and **VR308** (Rch) to read **4.3±0.1mV** on the AC Electronic Voltmeter. (AC EVM)

Standard value: Normal tape **4.3±0.1mV**
CrO_2 tape **5.0~8.0mV**

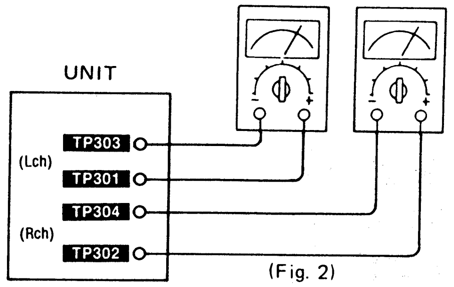

AC EVM
AC EVM
UNIT
TP303
(Lch)
TP301
TP304
(Rch)
TP302

RECORDING CURRENT ADJUSTMENT (DECK A)

1. Test equipment connection is shown in the figure. (Fig. 1)
2. Place the unit in the **"AUX"** position and the cassette deck in the **STOP** mode.
3. Short **"ERASE HEAD"** and **TP307 (GND).**
4. Place the cassette deck into **REC** mode.
5. Feed an AF Oscillator signal (1kHz) into the **AUX** terminal and adjust the input level to read **390±10mV** on the AC Electronic Voltmeter (AC EVM).
6. Test equipment connection is shown in the figure. (Fig. 2)
7. Place the cassette deck into the **REC** mode. (QZZCRA)
8. Adjust **VR305** (Lch) and **VR306** (Rch) to read **0.38±0.01mV** on the AC Electronic Voltmeter. (AC EVM)
9. Insert the CrO_2 tape. (QZZCRX)
10. Confirm that the reading increases **2~5dB** when compared with normal tape.


UNIT
AC EVM
(GND) TP307
OSCILLATE
TP305 TP306
(Lch) (Rch)
(1kHz)
AUX
TERMINAL

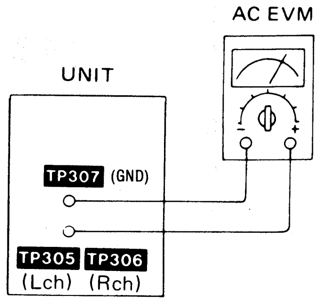
(Fig. 1)


AC EVM
AC EVM
UNIT
TP303
(Lch)
TP301
TP304
(Rch)
TP302

(Fig. 2)

PLAYBACK GAIN ADJUSTMENT (DECK A/B)

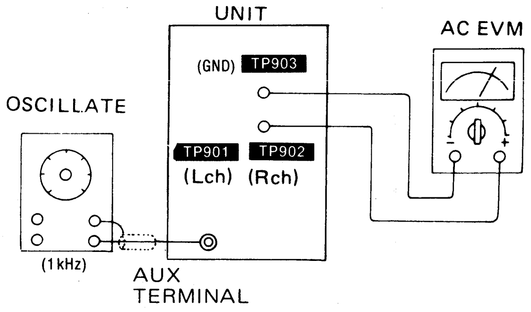
1. Test equipment connection is shown in the figure.
2. Playback test tape. **QZZCFM** (315Hz)
3. Adjust **VR301, 302** (DECK B) and **VR303, 304** (DECK A) to read **390±10mV** on the AC Electronic Voltmeter. (AC EVM)


AC EVM
UNIT
TP307 (GND)
TP305 TP306
(Lch) (Rch)

ALC CONFIRMATION (DECK A/B)

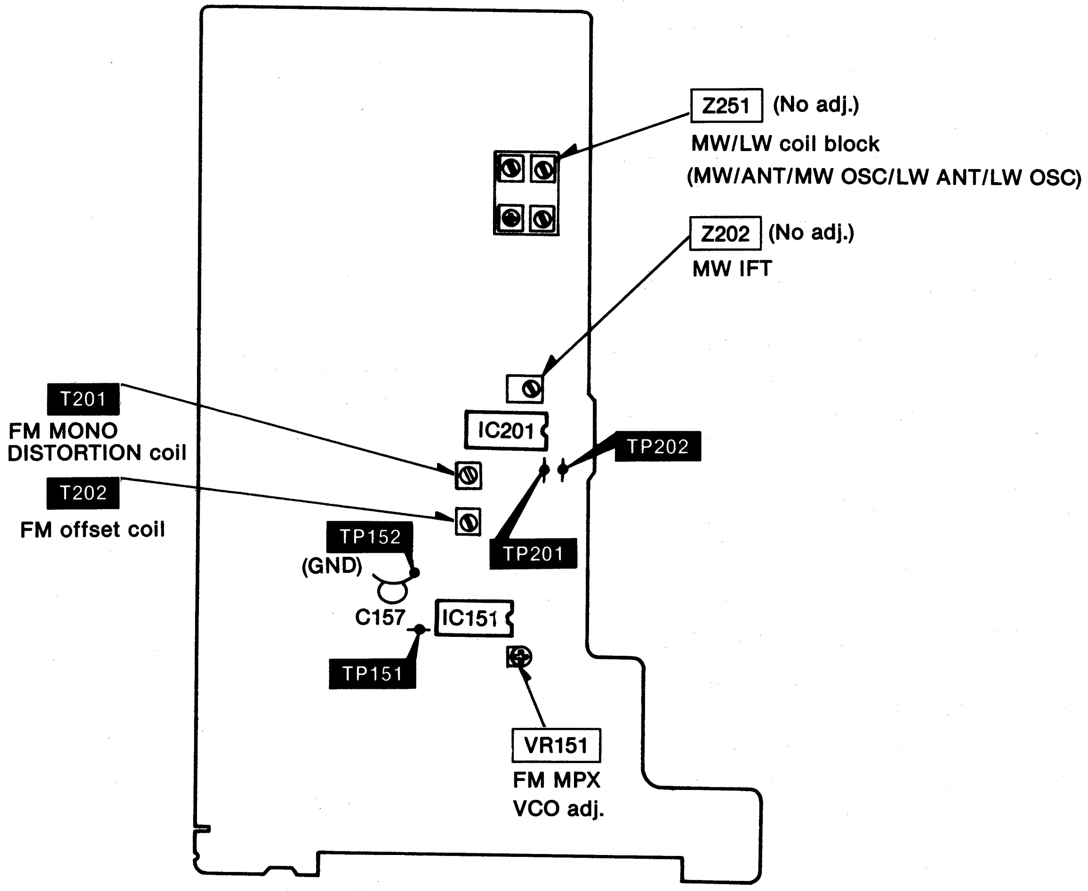
1. Test equipment connection is shown in the figure.
2. Place the unit in the **"AUX"** position.
3. Place the cassette deck in the **REC** mode.
4. Feed an AF Oscillator signal (1kHz) into the **AUX** terminal and adjust the input level to read **390±10mV** on the AC Electronic Voltmeter. (AC EVM)
5. Feed an input level of more than **+10dB** into the **AUX** terminal.
6. Confirm that the output on the AC EVM is within the standard value.

Standard value: 700~1170mV

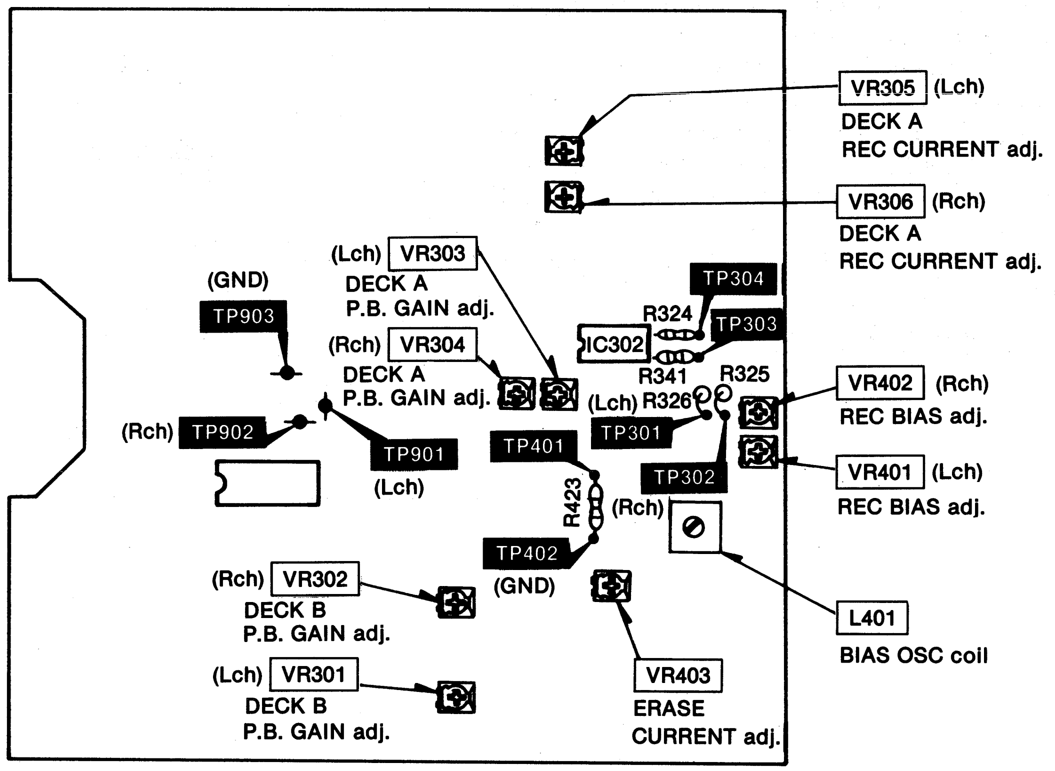

UNIT
AC EVM
(GND) TP903
OSCILLATE
TP901 TP902
(Lch) (Rch)
(1kHz)
AUX
TERMINAL

• Adjustment Points

• Tuner P.C.B.


Z251 (No adj.)
MW/LW coil block
(MW/ANT/MW OSC/LW ANT/LW OSC)
Z202 (No adj.)
MW IFT
T201
FM MONO
DISTORTION coil
T202
FM offset coil
IC201
TP202
TP152
(GND)
TP201
C157
IC151
TP151
VR151
FM MPX
VCO adj.

• Main P.C.B.


VR305 (Lch)
DECK A
REC CURRENT adj.
VR306 (Rch)
DECK A
REC CURRENT adj.
(GND)
TP903
(Lch) VR303
DECK A
P.B. GAIN adj.
(Rch) VR304
DECK A
P.B. GAIN adj.
TP304
R324
TP303
IC302
R341
R325
(Lch) R326
TP301
VR402 (Rch)
REC BIAS adj.
(Rch) TP902
TP901
(Lch)
TP401
R423
(Rch)
TP302
VR401 (Lch)
REC BIAS adj.
TP402
(GND)
(Rch) VR302
DECK B
P.B. GAIN adj.
(Lch) VR301
DECK B
P.B. GAIN adj.
VR403
ERASE
CURRENT adj.
L401
BIAS OSC coil

D

■ FUNCTION OF TERMINAL

• IC11 (LC6512A3377): PLL Controller

PIN NO.	IN/OUT	MARK	DESCRIPTION OF TERMINAL
1	I	PB3	Computer drive terminal.
2	O	DATA	Serial data output terminal.
3	O	CL	Clock signal terminal for serial data.
4	O	CE	Chip enable terminal.
5	—	PC3	Not used in this unit.
6	—	NC	Not used in this unit.
7	O	PD0	Auto/mono changeover terminal. (auto → 0V, mono → 5V)
8	—	PD1	Not used in this unit.
9		PD2	
10		PD3	
11		PE0	
12 ~ 14 • 22 ~ 25	O	PE1 ~ PE3 • PF0 ~ PF3	Digital signal terminal for display. Terminal for key return signal to external key matrix.
15	I	$\overline{\text{RES}}$	Reset terminal.
16	—	TEST	Ground terminal.
17		V_{SS}	
18	—	NC	Not used in this unit.
19			
20	I	OSC1	Connecting terminal for crystal oscillator.
21	O	OSC2	
26 ~ 29 • 31 ~ 34	O	PG0 ~ PG3 • PH0 ~ PH3	Segment signal terminal for display.
30	—	NC	Not used in this unit.
35	O	P10	Not used in this unit.
36	O	P11	Muting signal terminal. (Muting → High level)
37	I	$\overline{\text{HOLD}}$	Terminal for power failure detection.
38	I	$\overline{\text{INT}}$	Terminal for remote control cord.
39	I	V_{DD}	Power supply terminal of device. Voltage of 5V is supplied during operation of device.
40	I	PA0 ~ PA3	Terminal for key return signal to external key matrix.
41			
44			
45			
42 • 43	—	NC	Not used in this unit.
46	I	PB0 ~ PB2	Stereo signal terminal.
47			SD signal terminal.
48			Tuner select terminal. (Ground connection)

[KEY MATRIX]

Pin No.	45	44	41	40
14	CH4	CH3	CH2	CH1
22	CH8	CH7	CH6	CH5
23	—	—	CH0	CH9
24	—	LW	MW	FM
25	MODE	MEMORY	UP	DOWN

- **IC801 (LC6554H-3635): Microcomputer (for Amplifier/Tape Deck)**

PIN NO.	IN/OUT	MARK	DESCRIPTION OF TERMINAL
1 ~ 4	O	DECK A0 ~ DECK A3	DECK A control output terminal.
5 ~ 8	O	S0 ~ S3	Key Matrix output terminal.
10 ~ 12	I	K0 ~ K2	Key Matrix input terminal.
9	—	NC	Not used in this unit.
13	—	K3	Ground terminal.
14	I	VRΦ	Rotary encoder terminal for volume control (VR801).
15		VR1	
16	I	$\overline{AMP}$	Power supply detection terminal. • Power switch ON: "H", Power switch OFF: "L"
17	I	$\overline{HALT}$	HALT mode detection terminal. • HALT mode ON: "H", HALT mode OFF: "L"
18	I	$\overline{REC}$	Deck rec mode control terminal. • REC mode: "L"
19	I	$\overline{CDED}$	CD editing mode control terminal. • CD editing mode: "L"
20	—	NC	Not used in this unit.
21	—	CD PWR	Ground terminal.
22 ~ 24	—	NC	Not used in this unit.
25	O	$\overline{AUX}$	LED indication (AUX) terminal. • Light up: "L"
26	O	$\overline{TA}$	LED indication (TAPE) terminal. • Light up: "L"
27	O	$\overline{CD}$	LED indication (CD) terminal. • Light up: "L"
28	O	$\overline{TUN}$	LED indication (TUNER) terminal. • Light up: "L"
29	O	$\overline{PH}$	LED indication (PHONO) terminal. • Light up: "L"
30	—	TEST	Ground terminal.
31	—	V_{SS}	
32	I	OSC1	Connecting terminal for crystal oscillator. The crystal connected is 3.0MHz.
33	O	OSC2	
34	I	$\overline{RES}$	Microcomputer reset pulse input terminal.
35	I	STB	Serial data input terminal. Serial data transmission operation.
36	O	DATA	Serial data output terminal.
37	I/O	CLK	Clock signal I/O terminal.
38	O	VL MUTE	Muting control terminal.
39	I	RMT	Remote control data input terminal.
40 • 41	—	NC	Not used in this unit.
42	I	$\overline{SY\ CD}$	Synchro rec terminal.
43 ~ 50	—	NC	Not used in this unit.
51	—	VP	Ground terminal.
52	O	$\overline{MUTE}$	LED indication (MUTING) terminal.
53 ~ 59	O	L6 ~ L0	LED terminal for volume control and balance control.
60 ~ 62	O	DECK B0 ~ DECK B2	Deck B control output terminal.
63	O	A/B	Deck A/B LED indication (REMOTE) terminal. • Deck A: "L", Deck B: "H"
64	I	V_{DD}	Power supply terminal.

Input / Output	10	11	12
5	AUX	TAPE	TUNER
6	CD	PHOTO	—
7	—	BALANCE LEFT	—
8	—	BALANCE RIGHT	MUTE

- **IC803 (TC9312N073): Mechanism Control (Deck A)**

PIN NO.	IN/OUT	MARK	DESCRIPTION OF TERMINAL
1	—	GND	Ground terminal.
2	I	OSC	Connecting terminal for oscillator.
3	I	CL	Auto clear command signal input terminal.
4	I	IN1 (MODE)	Deck A mechanism mode detection terminal.
5	I	IN2 (REC)	Keying switch reading terminal. Input of Deck A REC (●) switch.
6	I	IN3	Deck A rec inhibit detection terminal.
7	—	NC	Not used in this unit.
8	I	IN5	Keying switch reading terminal. Input of Deck A PLAY (▶), STOP (■) and FF (▶▶) switch.
9	I	IN6	Keying switch reading terminal. Input of Deck A STOP (■) and REW (◀◀) switch.
10	I	IN7	Keying switch reading terminal. Input of Deck A FF (▶▶) and REW (◀◀) switch.
11	I	IN8	Deck A/B playback mode selector detection terminal.
12	I	IN9	Deck A/B timer mode selector detection terminal.
13	I	IN10	Deck A Hall IC signal detection terminal.
14	—	I/O 1	Ground terminal.
15	I	I/O 2 (HALF)	Deck A mechanism half detection terminal.
16	I	I/O 3	Editing start control terminal. • Start: "H"

PIN NO.	IN/OUT	MARK	DESCRIPTION OF TERMINAL
17	I	I/O 4	Deck A/B succession playback control terminal. • Deck B → Deck A: "H"
18	—	NC	Not used in this unit.
19	O	OUT9 (DMT)	Deck A muting control terminal. • Muting mode: "H"
20	O	OUT8	Deck A/B succession playback control terminal. • Deck A → Deck B: "H"
21	—	NC	Not used in this unit.
22	—	OUT6	Ground terminal.
23	O	OUT5	Editing control terminal. • Editing control: "H"
24	O	OUT4	Deck A LED [STOP (■)] drive terminal. • Light up: "H"
25	—	NC	Not used in this unit.
26	O	OUT2	Deck A plunger control terminal.
27	O	OUT1 (AMO)	Deck A motor drive terminal.
28	I	V_{DD}	Power supply terminal.

- **IC804 (TC9312N072): Mechanism Control (Deck B)**

PIN NO.	IN/OUT	MARK	DESCRIPTION OF TERMINAL
1	—	GND	Ground terminal.
2	I	OSC	Connecting terminal for oscillator.
3	I	CL	Auto clear command signal input terminal.
4	I	IN1 (MODE)	Deck B mechanism mode detection terminal.
5	I	IN2 (HALF)	Deck B mechanism half detection terminal.
6	I	IN3	Key switch reading terminal. Input of Deck B PLAY (▶) and STOP (■) switch.
7	I	IN4	Key switch reading terminal. Input of Deck B STOP (■) and REW (◀◀) switch.
8	I	IN5	Key switch reading terminal. Input of Deck B FF (▶▶) and REW (◀◀) switch.
9	I	IN6 (DUB)	Deck B editing mode detection terminal.
10	I	IN7	Deck B REW AUTO EDIT mode detection terminal.
11	I	IN8	Deck A/B playback mode selector detection terminal.
12	—	IN9	Ground terminal.
13	I	IN10	Deck B Hall IC signal detection terminal.
14	—	NC	Not used in this unit.
15	I	I/O 2	Editing control terminal. • Editing standby: "H"

PIN NO.	IN/OUT	MARK	DESCRIPTION OF TERMINAL
16	I	I/O 3	Deck A/B succession playback control terminal. • Deck A → Deck B: "H"
17	—	NC	Not used in this unit.
18	O	OUT10	Deck A/B succession playback control terminal. • Deck B → Deck A: "H"
19	O	OUT9	Deck B LED [STOP (■)] drive terminal. • Light up: "H"
20	O	OUT8	Editing start control terminal. • Start: "H"
21	—	NC	Not used in this unit.
22			
23	O	OUT5 (DUB)	Deck B LED (EDIT) drive terminal.
24	O	OUT4 (DMT)	Deck B muting control terminal. • Muting: "H"
25	—	NC	Not used in this unit.
26	O	OUT2	Deck B plunger control terminal.
27	O	OUT1 (BMO)	Deck B motor drive terminal.
28	I	V_{DD}	Power supply terminal.

ORDER NO. AD8804002C2-A

LW/MW/FM STEREO
DOUBLE CASSETTE RECEIVER

SA-X900L

FRANÇAIS

MEAURAGES ET REGLAGES

• LW/MW/FM

Positionnements des commandes et équipement utilisé.

- Générateur de signaux M.F. et A.M. (AM et FM-SG).
- Modulateur stéréophonique
- Analyseur de distorsion
- Oscilloscope
- Voltmètre électronique à C.A. et C.C. (EVM).
- Compteur de fréquence
- Bobine d'amortissement d'arrêet (100µH)
- Résistance (100kΩ)
- Condensateur céramique (200pF)

Nota: Pour **Z202** (MW. F.I.) et **Z251** (bobine ant. de MW, bobine oscil. de MW, bobine ant. de LW et bobine oscil. de LW) des éléments réglés sont fournis. Aussi, ne pas tourner les noyaux de ces pièces.

REGLAGE DE DISTORSION MONOPHONIQUE M.F.

1. Le raccordement de l'équipement d'essai est montré sur l'illustration.
2. Régler l'appareil sur la position "**FM**" (M.F.).
3. Adjuster le réglage de l'affichage de radiofréquence et du générateur de signaux sur **100,10MHz**.
4. Régler le noyau de **T202** de telle sorte que la tension measurée sur le mode de signaux soit de **0mV** (0±30mV) dans une plage de 300mV.
5. Adjuster **T201** de telle que le facteur de distorsion du nal de gauche soit minimisé.
6. Répéter les étapes 4 et 5 quelques fois.
7. S'assurer que les facteurs de distorsion du canal de gauche et du canal de droite soient sensiblement les mêmes l'un par rapport à l'autre.

Nota: Le tournevis de réglage utilisé devra être fait en résines.

REGLAGE MULTIPLEX DE L'OSCILLATEUR COMMANDÉ PAR VARIATION DE TENSION

1. Le raccordement de L'équipement d'essai est montré sur la figure.
2. Régler l'appareil sur la position "**FM-auto**" .
3. Régler le cadran radio et le générateur de signaux sur **100,10MHz**.
4. Adjuster **VR151** pour **19kHz±0,05Hz** sur le compteur de lecture de fréquences.

• CASSETTE

CONDITIONS POUR LE MESURAGE

- S'assurer que les têtes soient propres.
- S'assurer que le cabestan les galets-presseurs soient propres.
- Interrupter de réduction de bruit: "**OFF**"
- S'assurer que le commutateur d dispositif anti-battement soit sur "**A**".

BANDE D'ESSAI

- Réglage de l'angle des tetes de lecture (8kHz, −20dB), QZZCFM
- Réglage de la vitesse de défilement de la bande (3kHz, −10dB); QZZCWAT
- Bande vierge de référence normale; QZZCRA
- Bande vierge de référence CrO_2; QZZCRX

RÉGLAGE DE L'ANGLE DES TÊTES DE LECTURE (DECK A/B)

1. Le raccordement de L'équipement d'essai est montré à la figure de droite.
2. Faire jouer la partie réglée azimutale (8kHz, −20dB) de la bande d'essai (QZZCFM) et. régler la vis de mise au point azimutable de telle sorte que les puissances de sortie du canal de gauche et du canal de droite soient au maximum. (Si les positions de réglage du canal de gauche et du canal de droite sont différentes, trouver une position où les puissances de sortie des canaux de gauche et de droite soient équilibrées, puis effectuer la mise au point.)
3. En même temps, établir une forme d'onde de Lissajous et éliminer la déviation de phase.
4. Après le réglage, bloque les vis du réglage angulaire et de la hauteur des guides de bande.

REGLAGE DE LA VITESSE DE DÉFILEMENT DE LA BANDE (DECK A/B)

(DECK A)

1. Le raccordement de l'équipement d'essai est montré à la figure de droite.
2. Régler l'appareil sur la position "**TAPE**" .
3. Faire jouer la partie centrale de la bande d'essai (QZZCWAT).
4. Régler VR dans le moteur de telle sorte que la puissance de sortie soit en deçà de la normale.

Valeur normalisée: 3000±20Hz

(DECK B)

5. Faire jouer la partie centrale de la bande d'essai (QZZCWAT).
6. Régler VR dans le moteur de telle sorte que la puissance de sortie soit en deçà de la normale.

Valeur normalisée: 3000±45Hz

7. S'assurer que la différence entre DECK A et DECK B est inférieure 3±30Hz.

REGLAGE DE L'OSCILLATION DE POLARISATION (DECK A)

1. Le raccordement de l'équipement d'essai est montré sur l'illustration.
2. Placer l'appareil sur la position "**TAPE**" (bande).
3. Placer la platine pour cassette sur le mode "**REC**" [enregistrement (QZZCRA)].
4. Ajuster **L401** pour obtenir une lecture de **7~102kHz** sur le compteur de fréquences.
5. Placer le commutateur de battement sur la position "**B**" .
6. S'assurer que la valeur pour **2.5~5.0kHz** est comparable à celle de la position "**A**" .
7. Placer le commutateur de battement sur la position "**C**" .
8. S'assurer que la valeur pour **5.0~10kHz** est comparable à celle de la position "**A**" .

REGLAGE DU COURANT D'EFFACEMENT (DECK A)

1. Le raccordement de l'équipement d'essai est montré sur l'illustration.
2. Placer l'appareil sur la position "**TAPE**" (bande).
3. Placer la platine pour cassette sur le mode "**REC**" [enregistrement (QZZCRA)].
4. Ajuster **VR403** pour obtenir **70±5mV** sur le voltmètre électroinque.

Valeur standard: Bande normale Plus de 70±5mV
Bande CrO_2 Plus de 80mV

REGLAGE DE LA POLARISATION D'ENREGISTREMENT (DECK A)

1. Le raccordement de l'équipement d'essai est montré sur l'illustration.
2. Placer l'appareil sur la position "**TAPE**" (bande).
3. Placer la platine pour cassette sur le mode "**REC**" [enregistrement (QZZCRA)].
4. Ajuster **VR307** (canal de gauche) et **VR308** (canal de droite) pour obtenir **4,3±0,1mV** sur le voltmètre électroinque de C.A.

Valeur standard: Bande normale 4,3±0,1mV
Bande CrO₂ 5,0~8,0mV

REGLAGE DU COURANT D'ENREGISTREMENT (DECK A)

1. Le raccordement de l'équipement d'essai est montré sur l'illustration. (Fig. 1)
2. Placer l'appareil sur la position "**AUX**" (auxiliaire) et la platine pour cassette sur le monde "**STOP**" (arrêt).
3. Court-circuiter à "**ERASE HEAD**" et **TP307 (Terre).**
4. Placer la platine pour cassette sur le mode "**REC**" (enregistrement).
5. Fournir un signal (1kHz) oscillateur de fréquence audio à la borne "**AUX**" (auxiliaire) et régler le niveau d'entrée pour obtenir **390±10mV** sur le voltmètre électronique de C.A.
6. Le raccordement de l'équipement d'essai est montré sur l'illustration. (Fig. 2)
7. Placer la platine pour cassette sur le mode "**REC**" [enregistrement (QZZCRA)].
8. Ajuster **VR305** (canal de gauche) et **VR306** (canal de droite) pour obtenir **0,38±0,01mV** sur le voltmètre électroinque de C.A.
9. Introduire la cassette à l'oxyde de chrome (QZZCRX).
10. S'assurer que la valeur est supérieure de **2~5dB** par rapport à une cassette normale.

REGLAGE DE L'AMPLIFICATION DE LECTURE (DECK A/B)

1. Le raccordement de l'équipement d'essai est montré sur l'illustration.
2. Bande d'essai de lecture **QZZCFM** (315Hz).
3. Ajuster **VR301, 302** (DECK B) et **VR303, 304** (DECK A) pour obtenir **410±10mV** sur le voltmètre électroinque de C.A.

VERIFICATION DE L'ALC (DECK A/B)

1. Les appareils de test sont raccordés comme sur la figure.
2. Placer l'appareil en mode "**AUX**".
3. Placer le magnétophone en mode "**REC**".
4. Appliquer le signal de l'oscillateur (1kHz) sur la borne AUX et régler le niveau pour obtenir **390±10mV** sur le voltmètre électronique (AC EVM).
5. Appliquer alors une tension d'entrée supérieure de 10dB sur la borne AUX.
6. S'assurer que la valeur indiquée par le voltmètre est comprise dans les limites de la valeur standard.

Valeur standard: 700~1000mV

ESPAÑOL

MEDICIONES Y AJUSTES

• AM (LW/MW/FM)

POSICIONES DE CONTROL Y EQUIPO USADO.

- Generador de señales de AM y FM (AM y FM-SG)
- Voltimetro electrónico de CA y CC (EVM)
- Analizador de distorsiones
- Osciloscopio
- Modulador estéreo
- Frecuencimetro
- Bobina de choque (100μH)
- Resistor (100kΩ)
- Condensador cerámico (200pF)

Nota: Para **Z202** (MW-IFT) y **Z251** (bobina de ANT de MW, bobina de OSC MW, bobine de ANT de LW y bobina de OSC LW) son suministradas piezas ajustadas.
Por lo tanto, no gire los núcleos de estas piezas.

AJUSTE DE DISTORSION MONO FM

1. La conexión del equipo de pruebas se muestra en la figura.
2. Poner la unidad en modalidad de "**FM**".
3. Poner la presentación de la radio y la puesta del generador de señales **100,10MHz.**
4. Ajustar el núcleo de **T202** de manera que el voltaje medido en modalidad de señal sea **0mV** (0±30mV).
5. Ajustar **T201** de manera que el factor de distorsión de CH-I se minimice.
6. Repetir los pasos 4 y 5 algunas veces.
7. Asegurarse de que los factores de distorsión de CH I y CH D sean casi los mismos uno con el otro.

Nota: El destornillador de ajuste usado debe estar hecho de resina.

AJUSTE DE MPX VCO (OSCILADOR CONTROLADO POR VOLTAJE MPX)

1. La conexión del equipo de prueba se muestra en la figura.
2. Poner la unidad en la posición de "**FM auto**".
3. Coloque el indicador de la radio y la puesta del generador de señales en **100,10MHz.**
4. Ajuste **VR151** para **19,00±0,05kHz** en lectura de frecuencimetro.

• CASETE

CONDICION DE MEDICION:

- Asegúrese de que las cabezas estén limpias.
- Asegúrese de que el cabrestante y rodillo de presion estén limpios.
- Asegúrese de que el commutador a prueba de batido esté en "**A**".
- CONMUT. PR DOLBY: "**OFF**".

CINTA DE PRUEBA:

- Ajuste de acimut de cabeza (8kHz, −20dB): QZZCFM
- Ajuste de velocidad de cinta (3kHz, −10dB): QZZCWAT
- Vacante de referencia Normal: QZZCRA
- Vacante de referencia de CrO₂: QZZCRX

AJUSTE ACIMUTAL DE CABEZA (DECK A/B)

1. La conexión del equipo de pruebas se muestra en la figura.
2. Reproducir la parte ajustada de acimut (8kHz, −20dB) de la cinta de prueba (QZZCFM) y regular el tornillo de ajuste de ángulo de manera que las salidas de CH-I y CH-D sean maximizadas. (Cuando las posiciones de ajuste sean diferentes de CH-I y CH-D, encontrar una posición donde las salidas de CH-I y CH-D estén equilibradas y, luego, hacer el ajuste.)
3. Al mismo tiempo, trazar una forma de onda de Lissajous y eliminar la deflexión de fase.
4. Después del ajuste, aplicar cierre por tornillo al tornillo de ajuste de ángulo.

AJUSTE DE LA VELOCIDAD DE LA CINTA (DECK A/B)

(DECK A)

1. La conexión del equipo de prueba se muestra en la figura.
2. Coloque el aparato en la posición "**TAPE**".
3. Reproduzca la sección central de la cinta de prueba (QZZCWAT).
4. Ajuste el regulador VR del motor de modo que la salida quede comprendida dentro de los valores estándares.

Valores estándares: 3000±20Hz

(DECK B)

5. Reproduzca la sección central de la cinta de prueba (QZZCWAT).
6. Ajuste el regulador VR del motor de modo que la salida quede comprendida dentro de los valores estándares.

Valores estándares: 3000±45Hz

7. Confirme si la diferencia entre los valores de las platinas A y B está comprendida entre **30Hz**.

AJUSTE DE LA OSCILACION DE POLARIZACION (DECK A)

1. La conexión del equipo de prueba se muestra en la figura.
2. Coloque el aparato en la posición "**TAPE**".
3. Coloque la platina del casete en la modalidad REC (QZZCRA).
4. Regule L401 para que en el contador de frecuencia se lea entre **97** y **102kHz**.
5. Lleve el conmutador a prueba de interferencias a la posición "**B**".
6. Confirme si la frecuencia es de **2,5** a **5,0kHz** menor que la correspondiente a la posición "**A**".
7. Lleve el conmutador a prueba de interferencias a la posición "**C**".
8. Confirme si la frecuencia es de **5** a **10,0kHz** menor que la correspondiente a la posición "**A**".

AJUSTE DE LA CORRIENTE DE BORRADO (DECK A)

1. La conexión del equipo de prueba se muestra en la figura.
2. Coloque el aparato en la posición "**TAPE**".
3. Coloque la platina del casete en la modalidad **REC** (QZZCRA).
4. Regule **VR403** para que en el voltimetro electrónico de CA (AC EVM) se lea **70±5mV**.

Valores estándares: Cinta normal Más de **70±5mV**
Cinta de CrO_2 Más de **80mV**

AJUSTE DE LA POLARIZACION DE GRABACION (DECK A)

1. La conexión del equipo de prueba se muestra en la figura.
2. Coloque el aparato en la posición "**TAPE**".
3. Coloque la platina del casete en la modalidad **REC** (QZZCRA).
4. Regule **VR307** (L ch) y **VR308** (R ch) para que en el voltimetro electrónico de CA (AC EVM) se lea **4,3±0,1mV**.

Valores estándares: Cinta normal **4,3±0,1mV**
Cinta de CrO_2 **5,0~8,0mV**

AJUSTE DE LA CORRIENTE DE GRABACION (DECK A)

1. La conexión del equipo de prueba se muestra en la figura (Fig. 1).
2. Coloque el aparato en la posición "**AUX**" y la platina del casete en la modalidad STOP.
3. Ponga en cortocircuito "**ERASE HEAD**" y **TP307** (GND).
4. Coloque la platina del casete en la modalidad **REC**.
5. Suministre una señal del oscilador de AF (1kHz) al terminal **AUX** y ajuste el nivel de entrada par obtener **390±10mV** en el voltimetro electrónico de CA (AC EVM).
6. La conexión del equipo de prueba se muestra en la figura (Fig. 2).
7. Coloque la platina del casete en la modalidad **REC** (QZZCRA).
8. Regule **VR305** (L ch) y **VR306** (R ch) para que en el voltimetro electrónico de CA (AC EVM) se lea **0,38±0,01mV**.
9. Ponga la cinta de CrO_2 (QZZCRX).
10. Confirme que el valor sea de **2** a **5dB** mayor que el correspondiente a una cinta norma.

AJUSTE DE LA GANANCIA DE REPRODUCCION (DECK A/B)

1. La conexión del equipo de prueba se muestra en la figura.
2. Reproduzca la cinta de prueba **QZZCFM** (315Hz).
3. Regule **VR301, 302** (DECK B) y **VR303, 304** (DECK A) para que en el voltimetro electrónico de CA (AC EVM) se lea **390±10mV**.

CONFIRMACION DEL ALC (DECK A/B)

1. La conexión del equipo de prueba se muestra en la figura.
2. Coloque el aparato en la posición "**AUX**".
3. Coloque la platina del casete en la modalidad "**REC**".
4. Suministre una señal del oscilador de AF (1kHz) al terminal **AUX** y ajuste el nivel de entrada par obtener **390±10mV** en el voltimetro electrónico de CA (AC EVM).
5. Suministre el nivel de entrada anterior **+10dB** al terminal **AUX**.
6. Confirme si la salida del AC EVM está comprendida dentro de los valores estándares.

Valores estándares: 700~1000mV

Printed in Japan
H880401500 YY/TN
H880501800

■ RESISTORS & CAPACITORS

Notes : ∗ Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
∗ Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

Numbering System of Resistor

Example:

ERD	25	F	J	102
Type	Wattage (1/4W)	Shape	Tolerance	Value (1KΩ)
ERX	2	AN	J	471
Type	Wattage (2W)	Shape	Tolerance	Value (470Ω)

Numbering System of Capacitor

Example:

ECKD	1H	102	Z	F
Type	Voltage (50V)	Value (0.001μF)	Tolerance	Peculiarity
ECEA	50	M	330	
Type	Voltage (50V)	Pecliarity	Value (33μF)	

Resistor Type	Wattage		Tolerance
ERD : Carbon	10 : 1/8W	12 : 1/2W	J : ±5%
ERG : Metal Oxide	14 : 1/4W	25 : 1/4W	F : ±1%
ERQ : Fuse Type Metal	1A : 1W	18 : 1/8W	G : ±2%
ERX : Metal Film	S2 : 1/4W	S1 : 1/2W	J : ±5%
ERD L : Carbon (chip)	2F : 1/4W	50 : 1/2W	K : ±10%
ERO K : Metal Film (chip)	2A : 2W	3A : 3W	M : ±20%
ERC : Solid	6G : 1/10W	8G : 1/8W	
ERF : Incombustible Box-Shaped			
ERM : Wire-Wound			
RRJ : Cip Resistor			
ERJ : Cip Resistor			

Capacitor Type	Voltage		Tolerance
ECE : Electrolytic	0J : 6.3V	1A : 10V	K : ±10%
ECCD : Ceramic	1C : 16V	1E : 25V	M : ±20%
ECKD : Ceramic Capacitor	1H : 50V	1V : 35V	Z : $^{+80}_{-20}$ %
ECQM : Poyester	50 : 50V	05 : 50V	
ECQP : Polypropylene	2H : 500V	2A : 100V	J : ±5%
ECG : Ceramic	1 : 100V	1J : 63V	G : ±2%
ECEA N : Non Polar Electrolytic	KC : 400V AC		F : ±1%
QCU : Ceramic (Chip Type)	KC : 125V AC		C : ±0.25pF
ECUX : Ceramic (Chip Type)	(UL)		D : ±0.5pF
ECF : Semiconductor			
EECW : Liquid electrolyte double layer capacitor			

- ● Capacity are in microfarads (μF) unless specified otherwise, P = Pico-farads (pF) F = Farads (F).
- ● Resistance are in ohms (Ω), unless specified otherwise, 1K = 1,000Ω, 1M = 1,000kΩ

Ref. No.	Part No.	Value.
RESISTORS(VALUE,WATTAGE)		
R1	ERDS2TJ104	100K 1/4
R2	ERDS2TJ470	47 1/4
R3	ERDS2TJ104	100K 1/4
R4	ERDS2TJ824	820K 1/4
R5	ERDS2TJ391	390 1/4
R6	ERDS2TJ272	2.7K 1/4
R7	ERDS2TJ824	820K 1/4
R8	ERDS2TJ122	1.2K 1/4
R9	ERDS2TJ684	680K 1/4
R10	ERDS2TJ391	390 1/4
R15	ERDS2TJ821	820 1/4
R16	ERDS2TJ272	2.7K 1/4
R17	ERDS2TJ103	10K 1/4
R18	ERDS2TJ224	220K 1/4
R19	ERDS2TJ101	100 1/4
R20	ERDS2TJ101	100 1/4
R22	ERDS2TJ821	820 1/4
R23	ERDS2TJ104	100K 1/4
R24	ERDS2TJ104	100K 1/4
R30	ERDS2TJ104	100K 1/4
R31	ERDS2TJ104	100K 1/4
R32	ERDS2TJ104	100K 1/4
R33	ERDS2TJ104	100K 1/4
R40	ERDS2TJ473	47K 1/4
R41	ERDS2TJ473	47K 1/4
R42	ERDS2TJ103	10K 1/4
R46	ERDS2TJ101	100 1/4
R50	ERDS2TJ683	68K 1/4
R51	ERDS2TJ683	68K 1/4
R52	ERDS2TJ683	68K 1/4
R53	ERDS2TJ683	68K 1/4
R54	ERDS2TJ683	68K 1/4
R60	ERDS2TJ103	10K 1/4
R61	ERDS2TJ273	27K 1/4
R71	ERDS2TJ102	1K 1/4
R72	ERDS2TJ221	220 1/4
R73	ERDS2TJ271	270 1/4
R75	ERDS2TJ221	220 1/4
R88	ERDS2TJ103	10K 1/4
R89	ERDS2TJ104	100K 1/4
R90	ERDS2TJ104	100K 1/4
R95	ERDS2TJ103	10K 1/4
R101	ERDS2TJ103	10K 1/4
R102	ERDS2TJ103	10K 1/4
R104	ERDS2TJ102	1K 1/4
R105	ERDS2TJ561	560 1/4
R106	ERDS2TJ562	5.6K 1/4
R107	ERDS2TJ103	10K 1/4
R108	ERDS2TJ391	390 1/4
R151	ERDS2TJ393	39K 1/4
R152	ERD25FJ151	150 1/4
R153	ERDS2TJ223	22K 1/4
R154	ERDS2TJ223	22K 1/4
R155	ERDS2TJ222	2.2K 1/4
R156	ERDS2TJ222	2.2K 1/4
R157	ERDS2TJ562	5.6K 1/4
R158	ERDS2TJ562	5.6K 1/4
R159	ERDS2TJ224	220K 1/4
R160	ERD2FCG100	10 1/4
R161	ERDS2TJ102	1K 1/4
R162	ERDS2TJ153	15K 1/4
R163	ERDS2TJ473	47K 1/4
R164	ERDS2TJ473	47K 1/4
R165	ERDS2TJ103	10K 1/4
R166	ERDS2TJ102	1K 1/4
R167	ERDS2TJ473	47K 1/4
R168	ERDS2TJ222	2.2K 1/4
R169	ERDS2TJ102	1K 1/4
R170	ERDS2TJ102	1K 1/4
R171	ERDS2TJ104	100K 1/4
R201	ERDS2TJ222	2.2K 1/4
R202	ERDS2TJ824	820K 1/4
R203	ERDS2TJ122	1.2K 1/4
R204	ERDS2TJ824	820K 1/4
R205	ERDS2TJ391	390 1/4
R206	ERDS2TJ561	560 1/4
R207	ERDS2TJ822	8.2K 1/4
R208	ERDS2TJ102	1K 1/4
R209	ERDS2TJ471	470 1/4
R211	ERDS2TJ222	2.2K 1/4
R212	ERDS2TJ153	15K 1/4
R214	ERDS2TJ824	820K 1/4
R215	ERDS2TJ822	8.2K 1/4
R216	ERDS2TJ563	56K 1/4
R217	ERDS2TJ223	22K 1/4
R218	ERDS2TJ563	56K 1/4
R219	ERDS2TJ223	22K 1/4
R220	ERDS2TJ103	10K 1/4
R221	ERDS2TJ104	100K 1/4
R222	ERDS2TJ473	47K 1/4
R225	ERDS2TJ103	10K 1/4
R227	ERDS2TJ104	100K 1/4
R230	ERDS2TJ104	100K 1/4
R231	ERDS2TJ102	1K 1/4
R232	ERDS2TJ122	1.2K 1/4
R233	ERDS2TJ684	680K 1/4
R234	ERDS2TJ103	10K 1/4
R235	ERDS2TJ471	470 1/4
R237	ERDS2TJ391	390 1/4
R247	ERDS2TJ103	10K 1/4
R251	ERDS2TJ103	10K 1/4
R252	ERDS2TJ822	8.2K 1/4
R253	ERDS2TJ222	2.2K 1/4
R254	ERDS2TJ223	22K 1/4
R256	ERDS2TJ102	1K 1/4
R258	ERDS2TJ122	1.2K 1/4
R259	ERDS2TJ102	1K 1/4
R261	ERDS2TJ102	1K 1/4
R262	ERDS2TJ332	3.3K 1/4
R263	ERDS2TJ153	15K 1/4
R264	ERDS2TJ102	1K 1/4
R301	ERDS2TJ101	100 1/4
R302	ERDS2TJ101	100 1/4
R307	ERDS2TJ224	220K 1/4
R308	ERDS2TJ224	220K 1/4
R309	ERDS2TJ394	390K 1/4
R310	ERDS2TJ394	390K 1/4
R311	ERDS2TJ121	120 1/4
R312	ERDS2TJ121	120 1/4
R315	ERDS2TJ163T	16K 1/4
R316	ERDS2TJ163T	16K 1/4
R317	ERDS2TJ332	3.3K 1/4
R318	ERDS2TJ332	3.3K 1/4

Ref. No.	Part No.	Value.
R323	ERDS2TJ472	4.7K 1/4
R324	ERDS2TJ472	4.7K 1/4
R325	ERDS2TJ224	220K 1/4
R326	ERDS2TJ224	220K 1/4
R327	ERDS2TJ102	1K 1/4
R328	ERDS2TJ102	1K 1/4
R329	ERDS2TJ392	3.9K 1/4
R330	ERDS2TJ392	3.9K 1/4
R331	ERDS2TJ472	4.7K 1/4
R332	ERDS2TJ472	4.7K 1/4
R333	ERD25FJ100	10 1/4
R334	ERD25FJ100	10 1/4
R335	ERDS2TJ472	4.7K 1/4
R336	ERDS2TJ472	4.7K 1/4
R337	ERDS2TJ472	4.7K 1/4
R338	ERDS2TJ472	4.7K 1/4
R339	ERDS2TJ561	560 1/4
R341	ERD25TJ101S	100 1/4
R342	ERD25TJ101S	100 1/4
R343	ERDS2TJ224	220K 1/4
R344	ERDS2TJ224	220K 1/4
R345	ERDS2TJ394	390K 1/4
R346	ERDS2TJ394	390K 1/4
R347	ERDS2TJ163T	16K 1/4
R348	ERDS2TJ163T	16K 1/4
R351	ERDS2TJ121	120 1/4
R352	ERDS2TJ121	120 1/4
R353	ERDS2TJ332	3.3K 1/4
R354	ERDS2TJ332	3.3K 1/4
R355	ERDS2TJ472	4.7K 1/4
R356	ERDS2TJ472	4.7K 1/4
R357	ERDS2TJ224	220K 1/4
R358	ERDS2TJ224	220K 1/4
R359	ERDS2TJ103	10K 1/4
R360	ERDS2TJ103	10K 1/4
R361	ERDS2TJ103	10K 1/4
R362	ERDS2TJ103	10K 1/4
R365	ERDS2TJ224	220K 1/4
R366	ERDS2TJ224	220K 1/4
R367	ERDS2TJ223	22K 1/4
R368	ERDS2TJ223	22K 1/4
R369	ERDS2TJ102	1K 1/4
R370	ERDS2TJ102	1K 1/4
R371	ERDS2TJ123	12K 1/4
R372	ERDS2TJ123	12K 1/4
R373	ERDS2TJ222	2.2K 1/4
R374	ERDS2TJ222	2.2K 1/4
R375	ERDS2TJ101	100 1/4
R376	ERDS2TJ101	100 1/4
R377	ERDS2TJ332	3.3K 1/4
R378	ERDS2TJ332	3.3K 1/4
R379	ERDS2TJ272	2.7K 1/4
R380	ERDS2TJ272	2.7K 1/4
R385	ERDS2TJ821	820 1/4
R386	ERDS2TJ821	820 1/4
R387	ERDS2TJ393	39K 1/4
R388	ERDS2TJ393	39K 1/4
R389	ERDS2TJ822	8.2K 1/4
R390	ERDS2TJ822	8.2K 1/4
R391	ERDS2TJ273	27K 1/4
R392	ERDS2TJ273	27K 1/4
R393	ERDS2TJ224	220K 1/4
R394	ERDS2TJ224	220K 1/4
R405	ERDS2TJ473	47K 1/4
R406	ERDS2TJ102	1K 1/4
R407	ERDS2TJ331	330 1/4
R410	ERDS2TJ103	10K 1/4
R415	ERDS2TJ472	4.7K 1/4
R416	ERDS2TJ472	4.7K 1/4
R422	ERDS2TJ221	220 1/4
R423	ERD25TJ1R0S	1 1/4
R424	ERDS2TJ221	220 1/4
R425	ERDS2TJ471	470 1/4
R426	ERDS2TJ4R7T	4.7 1/4
R427	ERDS2TJ4R7T	4.7 1/4
R428	ERDS2TJ183	18K 1/4
R429	ERDS2TJ183	18K 1/4
R430	ERD2FCG100	10 1/4
R431	ERDS2TJ152	1.5K 1/4
R433	ERDS2TJ182	1.8K 1/4
R434	ERDS2TJ222	2.2K 1/4
R435	ERDS2TJ103	10K 1/4
R438	ERDS2TJ103	10K 1/4
R439	ERDS2TJ103	10K 1/4
R441	ERDS2TJ472	4.7K 1/4
R442	ERDS2TJ472	4.7K 1/4
R443	ERDS2TJ222	2.2K 1/4
R444	ERDS2TJ222	2.2K 1/4
R445	ERDS2TJ104	100K 1/4
R446	ERDS2TJ104	100K 1/4
R447	ERDS2TJ102	1K 1/4
R448	ERDS2TJ222	2.2K 1/4
R449	ERDS2TJ223	22K 1/4
R450	ERDS2TJ103	10K 1/4
R451	ERDS2TJ103	10K 1/4
R452	ERDS2TJ102	1K 1/4
R453	ERDS2TJ103	10K 1/4
R455	ERDS2TJ103	10K 1/4
R456	ERDS2TJ103	10K 1/4
R459	ERD2FCG100	10 1/4
R460	ERDS2TJ222	2.2K 1/4
R467	ERD25FJ221	220 1/4
R468	ERDS2TJ102	1K 1/4
R501	ERDS2TJ222	2.2K 1/4
R502	ERDS2TJ222	2.2K 1/4
R503	ERDS2TJ332	3.3K 1/4
R504	ERDS2TJ332	3.3K 1/4
R505	ERDS2TJ102	1K 1/4
R506	ERDS2TJ102	1K 1/4
R507	ERDS2TJ223	22K 1/4
R508	ERDS2TJ223	22K 1/4
R509	ERDS2TJ391	390 1/4
R510	ERDS2TJ391	390 1/4
R511	ERDS2TJ224	220K 1/4
R512	ERDS2TJ224	220K 1/4
R513	ERDS2TJ563	56K 1/4
R514	ERDS2TJ563	56K 1/4
R515	ERDS2TJ680	68 1/4
R516	ERDS2TJ680	68 1/4
R517	ERDS2TJ271	270 1/4
R518	ERDS2TJ271	270 1/4
R519	ERDS2TJ184	180K 1/4
R520	ERDS2TJ184	180K 1/4
R521	ERDS2TJ123	12K 1/4
R522	ERDS2TJ123	12K 1/4
R523	ERDS2TJ563	56K 1/4
R524	ERDS2TJ563	56K 1/4
R525	ERDS2TJ221	220 1/4
R526	ERDS2TJ221	220 1/4
R527	ERDS2TJ102	1K 1/4
R528	ERDS2TJ102	1K 1/4
R529	ERDS2TJ224	220K 1/4
R530	ERDS2TJ224	220K 1/4
R531	ERDS2TJ272	2.7K 1/4
R532	ERDS2TJ272	2.7K 1/4
R533	ERDS2TJ102	1K 1/4
R534	ERDS2TJ102	1K 1/4
R535	ERDS2TJ473	47K 1/4
R536	ERDS2TJ473	47K 1/4
R537	ERDS2TJ473	47K 1/4
R538	ERDS2TJ103	10K 1/4
R539	ERDS2TJ103	10K 1/4
R540	ERDS2TJ103	10K 1/4
R543	ERDS2TJ222	2.2K 1/4
R544	ERDS2TJ182	1.8K 1/4
R545	ERDS2TJ472	4.7K 1/4
R546	ERDS2TJ104	100K 1/4
R547	ERDS2TJ103	10K 1/4
R549	ERDS2TJ104	100K 1/4
R550	ERDS2TJ104	100K 1/4
R551	ERDS2TJ224	220K 1/4
R552	ERDS2TJ224	220K 1/4
R553	ERDS2TJ823	82K 1/4
R554	ERDS2TJ823	82K 1/4
R555	ERDS2TJ224	220K 1/4
R556	ERDS2TJ224	220K 1/4
R557	ERDS2TJ152	1.5K 1/4
R558	ERDS2TJ152	1.5K 1/4
R559	ERDS2TJ154	150K 1/4
R560	ERDS2TJ154	150K 1/4
R561	ERDS2TJ102	1K 1/4
R562	ERDS2TJ102	1K 1/4
R563	ERDS2TJ682	6.8K 1/4
R564	ERDS2TJ682	6.8K 1/4
R565	ERDS2TJ223	22K 1/4
R566	ERDS2TJ223	22K 1/4
R567	ERDS2TJ392	3.9K 1/4
R568	ERDS2TJ392	3.9K 1/4
R569	ERDS2TJ223	22K 1/4
R570	ERDS2TJ223	22K 1/4
R571	ERDS2TJ222	2.2K 1/4
R572	ERDS2TJ222	2.2K 1/4
R573	ERDS2TJ102	1K 1/4
R574	ERDS2TJ102	1K 1/4
R579	ERDS2TJ102	1K 1/4
R581	ERDS2TJ563	56K 1/4
R582	ERDS2TJ563	56K 1/4
R585	ERDS2TJ563	56K 1/4
R586	ERDS2TJ563	56K 1/4
R587	ERDS2TJ392	3.9K 1/4
R588	ERDS2TJ392	3.9K 1/4
R589	ERDS2TJ224	220K 1/4
R590	ERDS2TJ224	220K 1/4
R591	ERDS2TJ472	4.7K 1/4
R592	ERDS2TJ472	4.7K 1/4
R593	ERDS2TJ472	4.7K 1/4
R599	ERDS2TJ103	10K 1/4
R601	ERDS2TJ102	1K 1/4
R602	ERDS2TJ102	1K 1/4
R603	ERDS2TJ393	39K 1/4
R604	ERDS2TJ393	39K 1/4
R605	ERDS2TJ393	39K 1/4
R606	ERDS2TJ393	39K 1/4
R607	ERDS2TJ272	2.7K 1/4
R608	ERDS2TJ272	2.7K 1/4
R609	ERDS2TJ154	150K 1/4
R610	ERDS1FJ331	330 1/2
R611	ERDS2TJ154	150K 1/4
R612	ERDS2TJ103	10K 1/4
R613	ERDS1FJ100	10 1/2
R614	ERDS1FJ100	10 1/2
R615	ERDS2TJ151	150 1/4
R616	ERDS2TJ151	150 1/4
R617	ERDS2TJ151	150 1/4
R618	ERDS2TJ151	150 1/4
R702	ERDS2TJ153	15K 1/4
R703	ERDS2TJ182	1.8K 1/4
R704	ERDS2TJ153	15K 1/4
R705	ERDS2TJ562	5.6K 1/4
R706	ERD2FCG820	82 1/4
R707	ERDS2TJ103	10K 1/4
R708	ERDS2TJ563	56K 1/4
R709	ERDS2TJ104	100K 1/4
R710	ERX12ANJR22P	0.22 1/2
R712	ERD2FCG100	10 1/4
R801	ERDS2TJ102	1K 1/4
R802	ERDS2TJ102	1K 1/4
R803	ERDS2TJ102	1K 1/4
R804	ERDS2TJ102	1K 1/4
R805	ERDS2TJ102	1K 1/4
R806	ERDS2TJ103	10K 1/4
R807	ERDS2TJ103	10K 1/4
R808	ERDS2TJ103	10K 1/4
R809	ERDS2TJ472	4.7K 1/4
R810	ERDS2TJ103	10K 1/4
R811	ERDS2TJ563	56K 1/4
R812	ERDS2TJ154	150K 1/4
R813	ERDS2TJ102	1K 1/4

Ref. No.	Part No.	Value.
R814	ERDS2TJ153	15K 1/4
R815	ERDS2TJ153	15K 1/4
R816	ERDS2TJ561	560 1/4
R817	ERDS2TJ103	10K 1/4
R818	ERDS2TJ472	4.7K 1/4
R819	ERDS2TJ472	4.7K 1/4
R820	ERDS2TJ472	4.7K 1/4
R821	ERDS2TJ472	4.7K 1/4
R822	ERDS2TJ472	4.7K 1/4
R823	ERDS2TJ104	100K 1/4
R824	ERDS2TJ104	100K 1/4
R826	ERDS2TJ223	22K 1/4
R827	ERDS2TJ102	1K 1/4
R828	ERDS2TJ333	33K 1/4
R829	ERDS2TJ103	10K 1/4
R830	ERDS2TJ102	1K 1/4
R831	ERDS2TJ103	10K 1/4
R832	ERDS2TJ333	33K 1/4
R834	ERDS2TJ472	4.7K 1/4
R835	ERDS2TJ472	4.7K 1/4
R841	ERDS2TJ181	180 1/4
R842	ERDS2TJ271	270 1/4
R844	ERDS2TJ271	270 1/4
R845	ERDS2TJ181	180 1/4
R846	ERDS2TJ222	2.2K 1/4
R847	ERDS2TJ222	2.2K 1/4
R848	ERDS2TJ103	10K 1/4
R849	ERDS2TJ181	180 1/4
R850	ERDS2TJ181	180 1/4
R851	ERDS2TJ471	470 1/4
R852	ERDS2TJ471	470 1/4
R853	ERDS2TJ472	4.7K 1/4
R854	ERDS2TJ472	4.7K 1/4
R867	ERDS2TJ332	3.3K 1/4
R868	ERDS2TJ103	10K 1/4
R870	ERDS2TJ272	2.7K 1/4
R901	ERDS2TJ562	5.6K 1/4
R902	ERDS2TJ562	5.6K 1/4
R903	ERDS2TJ103	10K 1/4
R904	ERDS2TJ333	33K 1/4
R905	ERDS2TJ221	220 1/4
R906	ERDS2TJ103	10K 1/4
R907	ERDS2TJ103	10K 1/4
R908	ERDS2TJ332	3.3K 1/4
R909	ERDS2TJ473	47K 1/4
R910	ERDS2TJ102	1K 1/4
R911	ERDS2TJ103	10K 1/4
R912	ERDS2TJ223	22K 1/4
R913	ERDS2TJ272	2.7K 1/4
R914	ERDS2TJ272	2.7K 1/4
R915	ERDS2TJ472	4.7K 1/4
R916	ERDS2TJ472	4.7K 1/4
R917	ERDS2TJ123	12K 1/4
R918	ERDS2TJ123	12K 1/4
CAPACITORS(VALUE,VOLTAGE)		
C1	ECBT1H102KB5	0.001 50
C2	RCBS1H3R3KCY	3.3P 50
C3	RCBS1H3R3KCY	3.3P 50
C4	RCBS1H3R3KCY	3.3P 50
C5	RCBS1H180JCY	18P 50
C6	RCBS1H181KBY	180P 50
C7	RCBS1H1R0MCY	1P 50
C8	ECCR1H060CC5	6P 50
C9	ECBT1H102KB5	0.001 50
C10	RCBS1H3R3KCY	3.3P 50
C11	RCBS1H180JCY	18P 50
C12	ECEA0JS102	1000 6.3
C13	ECKR1H103ZF5	0.01 50
C14	ECEA0JS102	1000 6.3
C15	ECEA1HKR22	0.22 50
C16	ECKD1H101KB	100P 50
C17	ECKR1H121KB5	120P 50
C18	ECBT1H102KB5	0.001 50
C18	RCBS1H181KBY	180P 50
C22	ECKR1H103ZF5	0.01 50
C25	ECEA1VK100B	10 35

Ref. No.	Part No.	Value.
C26	ECEA1VK3R3	3.3 35
C71	ECKR1H103ZF5	0.01 50
C72	ECEA1CKS100	10 16
C84	ECEA1CKS100	10 16
C101	RCBS1H150JCY	15P 50
C102	RCBS1H150JCY	15P 50
C103	ECBT1H102KB5	0.001 50
C104	RCBS1H181KBY	180P 50
C105	ECEA0JK101	100 6.3
C106	ECKR1H103ZF5	0.01 50
C107	ECKR1H103ZF5	0.01 50
C108	ECEA25M4R7R	4.7 25
C109	ECEA1CK330	33 16
C110	ECBT1H102KB5	0.001 50
C111	ECKR1H103ZF5	0.01 50
C151	ECEA1CK101	100 16
C152	ECEA1HKR47	0.47 50
C153	ECEA1HK010	1 50
C154	ECEA1VK3R3	3.3 35
C155	ECEA1VK3R3	3.3 35
C156	ECEA1VK3R3	3.3 35
C157	ECFTD392KXL	0.0039 25
C158	ECFTD392KXL	0.0039 25
C159	ECKR1H103ZF5	0.01 50
C160	ECFTD473KXL	0.047 25
C161	ECQP1471JZ	470P 125
C162	ECEA1CKS100	10 16
C163	ECBT1H102KB5	0.001 50
C164	ECBT1H102KB5	0.001 50
C165	ECFTD332KXL	0.0033 25
C166	ECFTD332KXL	0.0033 25
C176	ECKR1H103ZF5	0.01 50
C201	ECKR1H103ZF5	0.01 50
C202	ECKR1H103ZF5	0.01 50
C204	RCBS1H181KBY	180P 50
C205	ECKD1H223PF	0.022 50
C206	RCBS1H150JCY	15P 50
C208	ECEA0JK101	100 6.3
C209	ECEA1EK4R7	4.7 25
C210	ECKD1H223PF	0.022 50
C211	ECKD1H223PF	0.022 50
C212	ECKD1H223PF	0.022 50
C213	ECKD1H101KB	100P 50
C214	ECEA1CKS100	10 16
C215	ECKR1H103ZF5	0.01 50
C216	ECEA1HKR47	0.47 50
C217	ECEA1HK010	1 50
C218	ECCR1H060CC5	6P 50
C220	ECEA1CKS100	10 16
C222	ECFTD473KXL	0.047 25
C225	RCBS1H180JCY	18P 50
C226	ECKR1H103ZF5	0.01 50
C227	ECEA1CKS100	10 16
C251	ECKD1H223PF	0.022 50
C252	ECEA1HK010	1 50
C253	ECKD1H223PF	0.022 50
C303	ECKD1H561KB	560P 50
C304	ECKD1H561KB	560P 50
C305	ECKR1H331KB5	330P 50
C306	ECKR1H331KB5	330P 50
C307	ECQB1H822JZ	0.0082 50
C308	ECQB1H822JZ	0.0082 50
C309	ECEA0JK470	47 6.3
C310	ECEA0JK470	47 6.3
C311	ECEA1EK4R7	4.7 25
C312	ECEA1EK4R7	4.7 25
C315	ECFTD153KXL	0.015 25
C316	ECFTD153KXL	0.015 25
C317	ECFTD333KXL	0.033 25
C318	ECFTD333KXL	0.033 25
C319	ECKD1H681K	680P 50
C320	ECKD1H681K	680P 50
C321	ECKR1H331KB5	330P 50
C322	ECKR1H331KB5	330P 50
C323	ECQB1H822JZ	0.0082 50
C324	ECQB1H822JZ	0.0082 50
C325	ECEA0JK470	47 6.3

Ref. No.	Part No.	Value.
C326	ECEA0JK470	47 6.3
C327	ECEA1EK4R7	4.7 25
C328	ECEA1EK4R7	4.7 25
C329	ECFTD153KXL	0.015 25
C330	ECFTD153KXL	0.015 25
C331	ECEA1EK4R7	4.7 25
C332	ECEA1EK4R7	4.7 25
C335	ECQB1H333JZ3	0.033 50
C336	ECQB1H333JZ3	0.033 50
C339	ECFTD223KXL	0.022 25
C340	ECFTD223KXL	0.022 25
C343	ECFTD472KXL	0.0047 25
C344	ECFTD472KXL	0.0047 25
C345	ECEA1HKR33	0.33 50
C346	ECEA1HKR33	0.33 50
C347	ECCR1H020C5	2P 50
C348	ECCR1H020C5	2P 50
C349	ECEA1HK010	1 50
C350	ECEA1HK010	1 50
C351	ECCD1H560K	56P 50
C352	ECCD1H560K	56P 50
C353	ECKD1H681K	680P 50
C354	ECKD1H681K	680P 50
C355	ECEA1EK4R7	4.7 25
C356	ECEA1EK4R7	4.7 25
C357	ECCR1H020C5	2P 50
C358	ECCR1H020C5	2P 50
C401	ECKR1H103ZF5	0.01 50
C402	ECKR1H103ZF5	0.01 50
C403	ECKR1H103ZF5	0.01 50
C404	ECKR1H103ZF5	0.01 50
C405	ECEA1CU470	47 16
C406	ECEA1CU470	47 16
C407	ECEA1CK220	22 16
C408	ECEA1CU470	47 16
C410	ECKD1H221KB	220P 50
C411	ECKD1H221KB	220P 50
C412	ECQP1222JZ	0.0022 100
C413	ECQP1122JZ	0.0012 100
C414	ECQV1H104JZ	0.1 50
C415	ECQV1H104JZ	0.1 50
C416	ECQP1822FZ	0.0082 100
C417	ECFTD153KXL	0.015 25
C418	ECFTD332KXL	0.0033 25
C419	ECFTD332KXL	0.0033 25
C420	ECFTD682KXL	0.0068 25
C421	ECEA1CKS100	10 16
C422	ECKR1H103ZF5	0.01 50
C423	ECKR1H103ZF5	0.01 50
C424	ECFTD392KXL	0.0039 25
C425	ECKR1H103ZF5	0.01 50
C426	ECKR1H103ZF5	0.01 50
C427	ECEA1EK4R7	4.7 25
C428	ECEA1HK3R3	3.3 50
C433	ECKR1H103ZF5	0.01 50
C435	ECBT1E103ZF	0.01 25
C461	ECEA1HK010	1 50
C501	ECEA1HK3R3	3.3 50
C502	ECEA1HK3R3	3.3 50
C503	ECKD1H101KB	100P 50
C504	ECKD1H101KB	100P 50
C505	ECKD1H102KB	0.001 50
C506	ECKD1H102KB	0.001 50
C507	ECEA0JK330	33 6.3
C508	ECEA0JK330	33 6.3
C509	ECFTD223KXL	0.022 25
C510	ECFTD223KXL	0.022 25
C511	ECFTD682KXL	0.0068 25
C512	ECFTD682KXL	0.0068 25
C513	ECEA1HK010	1 50
C514	ECEA1HK010	1 50
C515	ECKR1H103ZF5	0.01 50
C516	ECKR1H103ZF5	0.01 50
C517	ECEA1EK4R7	4.7 25
C518	ECEA1EK4R7	4.7 25
C519	ECKR1H103ZF5	0.01 50
C520	ECKR1H103ZF5	0.01 50

Ref. No.	Part No.	Value.
C521	ECKR1H103ZF5	0.01 50
C522	ECKR1H103ZF5	0.01 50
C523	ECCD1H470K	47P 50
C525	ECEA1EK4R7	4.7 25
C526	ECEA1CK220	22 16
C527	ECCD1H150KC	15P 50
C528	ECCD1H150KC	15P 50
C529	ECKD1H101KB	100P 50
C530	ECKD1H101KB	100P 50
C531	ECKD1H101KB	100P 50
C532	ECKD1H101KB	100P 50
C533	ECEA1HK010	1 50
C534	ECEA1HK010	1 50
C535	ECEA1HK010	1 50
C536	ECEA1HK010	1 50
C537	ECEA1HK010	1 50
C538	ECEA1HK010	1 50
C539	ECFTD473KXL	0.047 25
C540	ECFTD473KXL	0.047 25
C541	ECFTD183KXL	0.018 25
C542	ECFTD183KXL	0.018 25
C543	ECFTD104KXL	0.1 25
C544	ECFTD104KXL	0.1 25
C545	ECFTD332KXL	0.0033 25
C546	ECFTD332KXL	0.0033 25
C547	ECFTD223KXL	0.022 25
C548	ECFTD223KXL	0.022 25
C549	ECKR1H103ZF5	0.01 50
C550	ECKR1H103ZF5	0.01 50
C551	ECEA1AK470B	47 10
C552	ECEA1EK4R7	4.7 25
C553	ECFTD473KXL	0.047 25
C554	ECFTD473KXL	0.047 25
C555	ECEA1HK010	1 50
C556	ECEA1HK010	1 50
C557	ECEA1EK4R7	4.7 25
C558	ECEA1EK4R7	4.7 25
C560	ECKR1H103ZF5	0.01 50
C561	ECCR1H100F5	10P 50
C562	ECCR1H100F5	10P 50

Ref. No.	Part No.	Value.
C562	RCBS1H100JLY	10P 50
C601	ECEA1HK3R3	3.3 50
C602	ECEA1HK3R3	3.3 50
C603	ECKD1H101KB	100P 50
C604	ECKD1H101KB	100P 50
C605	ECKD1H102KB	0.001 50
C606	ECKD1H102KB	0.001 50
C607	ECCR1H120K5	12P 50
C608	ECCR1H120K5	12P 50
C609	ECEA1HS330	33 50
C610	ECKD1H102KB	0.001 50
C611	ECFTD473KXL	0.047 25
C612	ECFTD473KXL	0.047 25
C617	ECEA1CKS100	10 16
C618	ECEA1CKS100	10 16
C619	ECFTD473KXL	0.047 25
C621	ECFTD473KXL	0.047 25
C622	ECFTD473KXL	0.047 25
C701	ECEA1HU332U	3300 50
C702	ECEA1HU332U	3300 50
C703	ECQM1104KZW	0.1 100
C704	ECEA1VU222	2200 35
C705	ECEA1CU470	47 16
C706	ECEA1CKS100	10 16
C707	ECEA1CU101	100 16
C708	ECEA1VU101	100 35
C709	ECEA1CU101	100 16
C710	ECKR1H103ZF5	0.01 50
C711	ECEA1CKS100	10 16
C712	ECEA1CU471	470 16
C713	ECEA1HN010S	1 50
C715	ECKR2H102PU	0.001 500
C716	ECKWNS103ZVS	0.01
C717	ECEA1HU101	100 50
C718	ECKR1H103ZF5	0.01 50
C719	ECKR1H103ZF5	0.01 50
C720	ECKR1H103ZF5	0.01 50
C721	ECKR1H103ZF5	0.01 50
C722	ECEA1CU101	100 16
C801	ECBT1E103ZF	0.01 25
C802	ECEA0JK101	100 6.3
C803	ECBT1E103ZF	0.01 25

Ref. No.	Part No.	Value.
C804	ECEA0JS102	1000 6.3
C805	RCBS1H271KBY	270P 50
C806	RCBS1H271KBY	270P 50
C807	ECEA1HK2R2	2.2 50
C808	RCBS1H271KBY	270P 50
C809	ECEA1HK2R2	2.2 50
C811	RCBC1H101KBY	100P 50
C812	RCBC1H101KBY	100P 50
C813	RCBC1H101KBY	100P 50
C814	ECKR1H103ZF5	0.01 50
C815	ECKR1H103ZF5	0.01 50
C816	ECBT1E103ZF	0.01 25
C817	ECKR1H103ZF5	0.01 50
C818	ECKR1H103ZF5	0.01 50
C819	ECKR1H103ZF5	0.01 50
C820	ECKR1H103ZF5	0.01 50
C821	ECKR1H103ZF5	0.01 50
C822	ECFR1E104ZF5	0.1 25
C823	ECQB1H822JZ	0.0082 50
C824	ECFR1E104ZF5	0.1 25
C825	ECFR1E104ZF5	0.1 25
C826	ECQB1H822JZ	0.0082 50
C827	ECEA0JK470	47 6.3
C828	ECEA0JK470	47 6.3
C829	ECFR1E104ZF5	0.1 25
C830	ECFR1E104ZF5	0.1 25
C831	ECEA0JS102	1000 6.3
C901	ECFTD472KXL	0.0047 25
C902	ECFTD472KXL	0.0047 25
C903	ECEA1HK010	1 50
C904	ECEA1HK010	1 50
C905	ECEA1HK010	1 50
C906	ECEA1HK010	1 50
C907	ECEA1CKS100	10 16
C908	ECEA1CKS100	10 16
C909	ECAG25ER68L	0.68 50
C910	ECAG25ER68L	0.68 50
C911	ECEA1CKS100	10 16
C913	ECEA1CU221	220 16
C914	ECEA1AU471	470 10
C915	ECEA1CKS100	10 16
C916	ECEA1CKS100	10 16

■ REPLACEMENT PARTS LIST

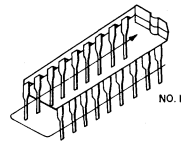
Notes : ∗ Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
∗ Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Description
INTEGRATED CIRCUITS		
IC11	LC6512A-3377	I.C, MICRO-COMPUTER
IC101	LM7001	I.C, FREQUENCY SYNTH.
IC151	SVIUPC1161C3	I.C., FM MPX
IC201	AN7273B	I.C, FM/AM IF AMP.
IC301	AN6558F	I.C, PLAYBACK AMP
IC302	AN6558F	I.C, PLAYBACK AMP
IC303	AN6552F	I.C, PRE AMP
IC304	AN6552F	I.C, REC AMP
IC305	AN6552F	I.C, BUFFER
IC501	AN6558F	I.C, BUFFER
IC502	TC9164N	I.C, INPUT SELECTOR
IC503	AN6558F	I.C, BUFFER
IC504	TC9212P	I.C, VOLUME CONT.
IC505	AN6558F	I.C, BUFFER
IC506	AN6558F	I.C, BUFFER
IC601	SVI3101B	I.C, POWER
IC701	AN7812	I.C, REGULATOR
IC702	AN78M05	I.C, REGULATOR
IC703	AN7815	I.C., REGULATOR
IC801	LC6554H-3635	I.C, MICRO COMPUTER
IC802	AN90B22	I.C, L.E.D DRIVE
IC803	TC9312AN-073	I.C, MECHANISM CONT.
IC804	TC9312AN-072	I.C, MECHANISM CONT.
IC805	AN90B22	I.C, INTERFACE
IC901	CXA1101P	I.C, DOLBY NR
IC951	DN6851A	INTEGRATED CIRCUIT
IC971	DN6851A	INTEGRATED CIRCUIT
TRANSISTORS		
Q1	2SK544F-AC	TRANSISTOR
Q2	2SC2786M	TRANSISTOR
Q3	2SC1675FL1L2	TRANSISTOR
Q4	2SC1675FL1L2	TRANSISTOR
Q17	2SC1740SSTA	TRANSISTOR
Q18	2SA933SSTA	TRANSISTOR
Q71	2SC1685RS	TRANSISTOR
Q82	2SA933SSTA	TRANSISTOR
Q101	2SC1740SSTA	TRANSISTOR
Q102	2SC1740SSTA	TRANSISTOR
Q151	2SC1740SSTA	TRANSISTOR
Q152	2SC1740SSTA	TRANSISTOR
Q153	2SA933SSTA	TRANSISTOR
Q201	2SC2787L	TRANSISTOR
Q202	2SC2787L	TRANSISTOR
Q205	2SC1740SSTA	TRANSISTOR
Q206	2SC1740SSTA	TRANSISTOR
Q207	2SC1740SSTA	TRANSISTOR
Q208	2SA933SSTA	TRANSISTOR
Q209	2SA933SSTA	TRANSISTOR
Q210	2SC1740SSTA	TRANSISTOR
Q251	2SA933SSTA	TRANSISTOR
Q252	2SC1740SSTA	TRANSISTOR
Q253	2SC1740SSTA	TRANSISTOR
Q254	2SC1740SSTA	TRANSISTOR
Q255	2SC1740SSTA	TRANSISTOR
Q256	2SC1740SSTA	TRANSISTOR
Q305	2SC1740SSTA	TRANSISTOR
Q306	2SC1740SSTA	TRANSISTOR
Q307	2SD1330R	TRANSISTOR
Q308	2SD1330R	TRANSISTOR
Q309	2SC1740SSTA	TRANSISTOR
Q310	2SC1740SSTA	TRANSISTOR
Q311	2SC2784EFTA	TRANSISTOR
Q312	2SC2784EFTA	TRANSISTOR
Q313	2SC2784EFTA	TRANSISTOR
Q315	2SC1740SSTA	TRANSISTOR
Q316	2SC1740SSTA	TRANSISTOR
Q317	2SD1330R	TRANSISTOR
Q318	2SD1330R	TRANSISTOR
Q319	2SD1330R	TRANSISTOR
Q320	2SD1330R	TRANSISTOR
Q325	2SC1740SSTA	TRANSISTOR
Q326	2SC1740SSTA	TRANSISTOR
Q329	2SD1330R	TRANSISTOR
Q330	2SD1330R	TRANSISTOR
Q401	2SA933SSTA	TRANSISTOR
Q404	2SC1740SSTA	TRANSISTOR
Q405	2SC1740SSTA	TRANSISTOR
Q406	2SC2784EFTA	TRANSISTOR
Q407	2SC2784EFTA	TRANSISTOR
Q408	2SD1330R	TRANSISTOR
Q409	2SD1330R	TRANSISTOR
Q411	DTA114ESTP	TRANSISTOR
Q412	2SC1740SSTA	TRANSISTOR
Q413	2SB621A-R	TRANSISTOR
Q414	2SD1330R	TRANSISTOR
Q415	2SC1384A-R	TRANSISTOR
Q416	2SA933SSTA	TRANSISTOR
Q417	2SC1740SSTA	TRANSISTOR
Q501	2SD1330R	TRANSISTOR
Q502	2SD1330R	TRANSISTOR
Q503	2SA933SSTA	TRANSISTOR
Q505	2SC1740SSTA	TRANSISTOR
Q506	2SC1740SSTA	TRANSISTOR
Q507	2SC1740SSTA	TRANSISTOR
Q508	2SC1740SSTA	TRANSISTOR
Q509	2SC1740SSTA	TRANSISTOR
Q510	2SC1740SSTA	TRANSISTOR
Q701	2SB941-P	TRANSISTOR
Q702	2SA933SSTA	TRANSISTOR
Q801	DTC124ES	TRANSISTOR
Q802	DTC124ES	TRANSISTOR
Q803	2SA933SSTA	TRANSISTOR
Q805	2SB1030RSTTA	TRANSISTOR
Q806	2SC1740SSTA	TRANSISTOR
Q807	2SB1030RSTTA	TRANSISTOR
Q808	2SC1740SSTA	TRANSISTOR
Q810	2SA933SSTA	TRANSISTOR
Q811	2SB621A-R	TRANSISTOR
Q811	2SB621A-R	TRANSISTOR
Q812	2SB621A-R	TRANSISTOR
Q812	2SB621A-R	TRANSISTOR
Q813	2SC1740SSTA	TRANSISTOR
Q814	2SC1740SSTA	TRANSISTOR
Q814	2SC1740SSTA	TRANSISTOR
Q815	DTC114YSTP	TRANSISTOR
Q821	2SA933SSTA	TRANSISTOR
Q901	2SC1740SSTA	TRANSISTOR
Q903	2SD1330R	TRANSISTOR
Q904	2SD1330R	TRANSISTOR
DIODES		
D1	SVC211SPA-AL	VARICAP
D2	SVC211SPA-AL	VARICAP
D3	SVC211SPA-AL	VARICAP
D6	MA165	DIODE
D7	MA165	DIODE
D8	MA165	DIODE
D9	MA165	DIODE
D10	MA165	DIODE
D11	MA165	DIODE
D12	MA165	DIODE
D13	MA165	DIODE
D14	MA165	DIODE
D15	MA165	DIODE
D16	MA165	DIODE
D17	MA165	DIODE
D18	MA165	DIODE
D19	MA165	DIODE
D20	MA165	DIODE
D21	MA4051-M	DIODE
D31	MA165	DIODE
D32	MA165	DIODE

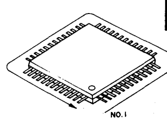
Ref. No.	Part No.	Description
D34	MA165	DIODE
D71	MA4062M	DIODE
D72	MA4270	DIODE
D89	MA165	DIODE
D101	MA165	DIODE
D151	MA165	DIODE
D204	MA165	DIODE
D206	MA165	DIODE
D401	MA165	DIODE
D402	MA4082M	DIODE
D403	MA165	DIODE
D404	MA29WA	DIODE
D406	MA165	DIODE
D407	MA165	DIODE
D408	MA165	DIODE
D410	MA165	DIODE
D411	MA165	DIODE
D412	MA165	DIODE
D413	MA29WA	DIODE
D414	MA4030M	DIODE
D504	MA165	DIODE
D701	GP15GLF	DIODE
D702	GP15GLF	DIODE
D703	GP15GLF	DIODE
D704	GP15GLF	DIODE
D705 ⚠	SVD1SR35200A	RECTIFIER
D706 ⚠	SVD1SR35200A	RECTIFIER
D707 ⚠	SVD1SR35200A	RECTIFIER
D708 ⚠	SVD1SR35200A	RECTIFIER
D709	MA165	DIODE
D710	MA165	DIODE
D711 ⚠	SVD1SR35200A	RECTIFIER
D712	MA165	DIODE
D801	MA165	DIODE
D803	LN058449P	L.E.D.
D804	LN058449P	L.E.D.
D805	LN058449P	L.E.D.
D806	LN058449P	L.E.D.
D807	LN058449P	L.E.D.
D809	LN081450P	L.E.D
D810	LN081450P	L.E.D
D811	LN081450P	L.E.D
D812	LN081450P	L.E.D
D813	LN081450P	L.E.D
D814	LN081450P	L.E.D
D815	LN081450P	L.E.D
D816	LN081450P	L.E.D
D819	LN346GP-C	L.E.D.
D820	LN846RP-C	L.E.D
D822	LN346GP-C	L.E.D.
D823	LN846RP-C	L.E.D
D825	MA165	DIODE
D826	MA165	DIODE
D827	MA165	DIODE
D828	MA165	DIODE
D829	MA165	DIODE
D830	MA165	DIODE
D831	MA165	DIODE
D832	MA165	DIODE
D833	MA165	DIODE
D834	MA165	DIODE
D835	MA165	DIODE
D836	MA165	DIODE
D841	LN346GP-C	L.E.D.
D842	LN346GP-C	L.E.D.
D901	MA165	DIODE
D902	MA165	DIODE
D903	MA165	DIODE
D904	MA165	DIODE
D951	RVD1SS133TA	DIODE
D971	RVD1SS133TA	DIODE
VARIABLE RESISTORS		
VR151	EVND4AA00B53	V.R, FM MPX VCO
VR301	EVND4AA00B24	V.R, PLAYBACK GAIN(B)
VR302	EVND4AA00B24	V.R, PLAYBACK GAIN(B)
VR303	EVND4AA00B24	V.R, PLAYBACK GAIN(A)
VR304	EVND4AA00B24	V.R, PLAYBACK GAIN(A)
VR305	EVND4AA00B54	V.R., REC CURRENT ADJ.
VR306	EVND4AA00B54	V.R., REC CURRENT ADJ.
VR401	EVND4AA00B25	V.R., REC BIAS ADJ.
VR402	EVND4AA00B25	V.R., REC BIAS ADJ.
VR403	EVND4AA00B53	V.R, ERASE CURRENT
VR501	EWCXEA011C15	V.R
VR502	EWCXEA011C15	V.R
VR801	EVQWWVF2024B	V.R, VOLUME
PHOTO COUPLER		
Z11	GP1U509M	DIODE , REMOTE SENSOR
COILS AND TRANSFORMERS		
L1	RLQZP1R2KT-Y	CHOKE COIL
L2	RLQZP1R2KT-Y	CHOKE COIL
L12	RLQZP101KT-Y	COIL
L102	RLQZP1R2KT-Y	CHOKE COIL
L203	ELEPKR22MA	COIL
L204	ELEPKR22MA	COIL
L301	SLQX303-1K	CHOKE COIL
L302	SLQX303-1K	CHOKE COIL
L303	QLB5X2722D	COIL
L304	QLB5X2722D	COIL
L401	SL09C9-K	OSCILLATOR COIL
L402	ELEPK120KA	COIL
L801	ELEPK101KA	CHOKE COIL
L802	ELEPK101KA	CHOKE COIL
L803	ELEPK101KA	CHOKE COIL
L804	ELEPK101KA	CHOKE COIL
L805	SLQU270-4Y	CHOKE COIL
L806	SLQU270-4Y	CHOKE COIL
L807	SLQU270-4Y	CHOKE COIL
L808	SLQU270-4Y	CHOKE COIL
L901	SLM1B9-P	MPX COIL
L902	SLM1B9-P	MPX COIL
T201	SLI4B511-Z	I.F.TRANSFORMER
T202	SLI4B513-Z	I.F.TRANSFORMER
T701 (EK)	⚠ SLT5M531	POWER TRANSFORMER
T701 (E, EH, EB, EF)	⚠ SLT5M532	POWER TRANSFORMER
COMPONENT COMBINATIONS		
Z11	EXBF8E104J	COMBINATION
Z12	EXBF9E104J	COMBINATION
Z13	EXFP8331MW	COMBINATION
Z202	SLI7Z101-T	I.F.TRANSFORMER
Z251	SLA6Z1-T	COIL
Z801	EXBF6E331J	COMBINATION PART
Z802	EXBF9E102J	COMBINATION PART
Z803	EXBF5E472J	COMPONENT COMBINATION
FILTERS		
CF201	SVFE107MS8A	CERAMIC FILTER (RED)
CF201	SVFE107MS8D	CERAMIC FILTER (BLACK)
CF201	SVFE107MS8E	CERAMIC FILTER (WHITE)
CF202	SVFE107MS8A	CERAMIC FILTER (RED)
CF202	SVFE107MS8D	CERAMIC FILTER (BLACK)
CF202	SVFE107MS8E	CERAMIC FILTER (WHITE)
OSCILLATORS		
X12	EF0A960K04A	CRYSTAL OSCILLATOR
X101	SVQ49U722-DM	OSCILLATOR
X801	EF0FC3004A4	CRYSTAL OSCILLATOR
DISPLAYS		
FL11	SAD8MT42ZYK	DISPLAY TUBE
FUSES		
F1 ⚠	XBA2C06TB0	FUSE 250V, T600mA
SWITCHES		
S1	EVQQB005R	SW, CH1
S2	EVQQB005R	SW, CH2
S3	EVQQB005R	SW, CH3
S4	EVQQB005R	SW, CH4
S5	EVQQB005R	SW, CH5
S6	EVQQB005R	SW, CH6

Ref. No.	Part No.	Description
S7	EVQQB005R	SW, CH7
S8	EVQQB005R	SW, CH8
S9	EVQQB005R	SW, CH9
S10	EVQQB005R	SW, CH0
S11	EVQQB005R	SW, FM
S12	EVQQB005R	SW, MW
S13	EVQQB005R	SW, LW
S14	EVQQB005R	SW, MEMORY
S15	EVQQB005R	SW, MODE
S16	EVQQB005R	SW, DOWN
S17	EVQQB005R	SW, UP
S401	SSH150	SW, W.D.S
S501	SSH1196	SW, SUPER BASS
S701 ⚠	ESB8249V	SW, POWER
S801	EVQQB005R	SW, AUX
S802	EVQQB005R	SW, TAPE
S803	EVQQB005R	SW, TUNER
S804	EVQQB005R	SW, CD
S805	EVQQB005R	SW, PHONO
S806	EVQQB005R	SW, L
S807	EVQQB005R	SW, R
S808	EVQQB005R	SW, MUTE
S809	EVQQB005R	SW, FF
S810	EVQQB005R	SW, PLAY
S811	EVQQB005R	SW, STOP
S813	EVQQB005R	SW, REW
S814	EVQQB005R	SW, REC MUTE
S815	EVQQB005R	SW, FF
S816	EVQQB005R	SW, PLAY
S817	EVQQB005R	SW, STOP
S819	EVQQB005R	SW, REW
S820	EVQQB005R	SW, STOP
S821	EVQQB005R	SW, DUB
S822	EVQQB005R	SW, WR/DUB
S823	SSS180-1	SLIDE SWITCH
S824	SSS180-1	SLIDE SWITCH
S901	SSH1159	SW, DOLBY NR
DECK(A)		
SWITCHES		
S971	RSH1A89Z	SW, MODE
S972	RSH1A90Z	SW, HALF
S973	RSH1A90Z	SW, REC
S974	RSH1A90Z	SW, CR
DECK(B)		
SWITCHES		
S951	RSH1A89Z	SW, MODE
S952	RSH1A90Z	SW, HALF
S953	RSH1A90Z	SW, CR

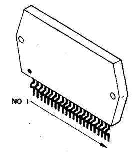
■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES



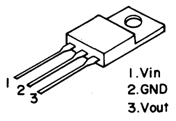
AN6552F	8 Pin	LM7001	16 Pin	TC9164N	28 Pin
AN6558F	8 Pin	AN90B22	18 Pin	TC9312AN-072	28 Pin
CXA1101P	16 Pin	AN7273A	18 Pin	TC9312AN-073	28 Pin
AN7470	16 Pin	TC9212P	20 Pin	LC6554H-3635	64 Pin



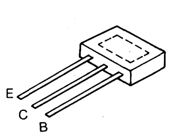
LC6512A-3377	48 Pin



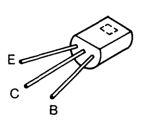
SVI3101B



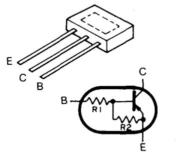
AN7812
AN7815
AN781105



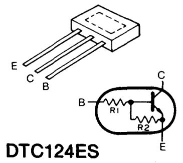
2SD1450R, 2SC2787L
2SC2784E, 2SC1675F
2SA933S, 2SC2786M
2SC1740S, 2SC1384A-Q
2SB1030R, 2SC1685R



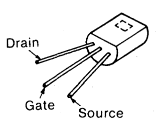
2SB621A-R



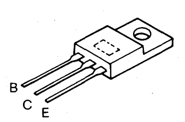
DTA114ESTP



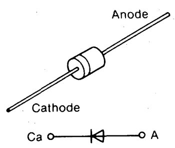
DTC124ES
DTC114YSTP



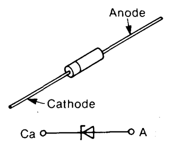
2SK544F



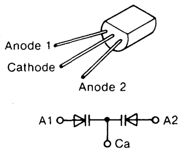
2SB941P



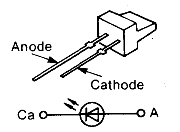
GP15GLF, 1SR35200, MA165, MA29WA, 1SS254



MA4082M
MA4030M
MA4051M
MA4062M
MA4270M



SVC211SPA-AL



LN846RP, LN346GP

■ REPLACEMENT PARTS LIST

Notes : * Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

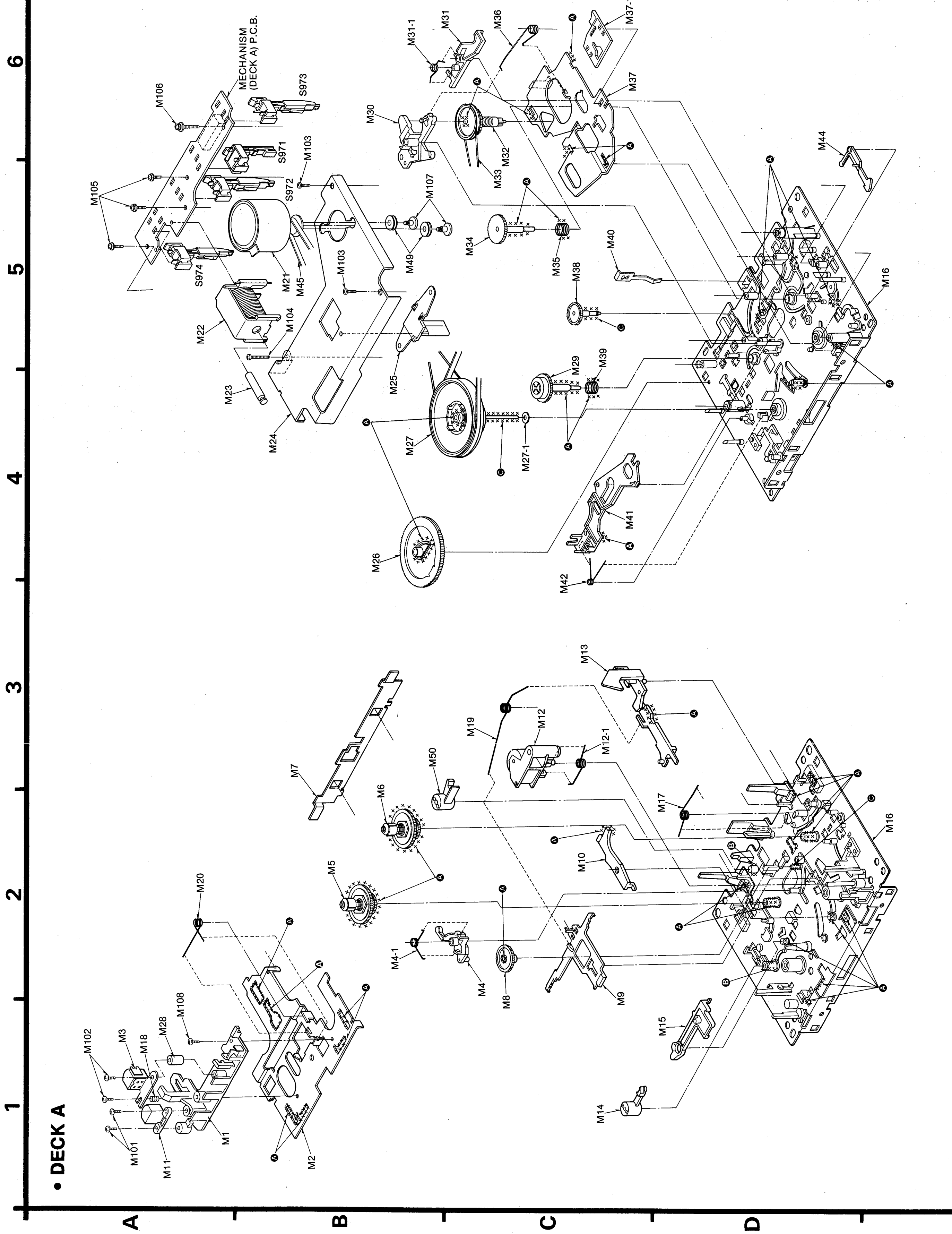
Ref. No.	Part No.	Description
DECK(A)		
CASSETTE DECK		
M1	RMD5013ZB	ANGLE
M2	RUA793YA	CHASSIS
M3	RJH4C36GZAM	MAGNETIC HEAD
M4	1UB0089ZA	LEVER
M4-1	RUW148ZA	COIL SPRING
M5	1DM0005ZA	LEVER
M6	1DM0017ZA	REEL TABLE ASS'Y
M7	RUB502ZC	LEVER
M8	RDG5772Z	GEAR
M9	RUB508ZA	LEVER
M10	RUB506ZB	LEVER
M11	RJH7E5YAM	MAGNETIC HEAD
M12	1UB0087ZA	LEVER
M12-1	RUW140ZB	COIL SPRING
M13	RUB507ZC	LEVER
M14	RNL1Z	DAMPER ARM
M15	RUB503ZB	LEVER
M16	RZUAR300	PLATE
M17	RUW142ZA	COIL SPRING
M18	QBA51278	SPRING
M19	RUW144ZA	COIL SPRING
M20	RUW139ZA	SPRING
M21	RFM144ZA	MOTOR
M22	1UE0015ZA	PLUNGER
M23	RUB428Z	LEVER
M24	RUL1030ZC	ANGLE
M25	RMD5017ZA	ANGLE
M26	RDG5927ZA	GEAR
M27	1DW0037ZA	FLYWHEEL ASS'Y
M27-1	RNW139ZA	WASHER
M28	RHM278ZA	SPACER
M29	1DG0006ZA	GEAR ASS'Y
M30	RUB513ZC	LEVER
M31	1UB0091ZA	LEVER
M31-1	RUW146ZA	COIL SPRING
M32	1DR0011ZA	PULLEY ASS'Y
M33	RDV90ZB	BELT
M34	RDG5769ZA	GEAR
M35	RUQ10Z	SPRING
M36	RUW145ZA	COIL SPRING
M37	1UB0090ZA	ROD
M37-1	RUB512ZB	LEVER
M38	RDG5773Z	GEAR
M39	RUQ30Z	SPRING
M40	RUS609Z	SPRING
M41	RUB514ZB	LEVER
M42	RUW147ZA	COIL SPRING
M44	RUB509ZA	LEVER
M45	RDV109ZA	BELT
M49	RHG3032Z	RUBBER CUSHION
M50	RNL180ZA	LEVER
M101	QHQ1361A	SCREW
M102	RHE5201ZA	SCREW
M103	XTN26+7J	SCREW
M104	XTN26+16F	SCREW
M105	XTW2+8S	SCREW
M106	XYC2+JF16	SCREW
M107	XSN26+3	SCREW
M108	XTN2+5F	SCREW
DECK(B)		
CASSETTE DECK		
M1	RMD5013ZB	ANGLE
M2	RUA793YA	CHASSIS
M3	RJH4C34GVAM	MAGNETIC HEAD
M4	1UB0089ZA	LEVER
M4-1	RUW148ZA	COIL SPRING
M5	1DM0005ZA	LEVER
M6	1DM0017ZA	REEL TABLE ASS'Y
M7	RUB502ZC	LEVER
M8	RDG5772Z	GEAR
M9	RUB508ZA	LEVER
M10	RUB506ZB	LEVER
M11	RUG82Z	GUIDE
M12	1UB0087ZA	LEVER
M12-1	RUW140ZB	COIL SPRING
M13	RUB507ZC	LEVER
M14	RNL1Z	DAMPER ARM
M15	RUB503ZB	LEVER
M16	RZUAR300	PLATE
M17	RUW142ZA	COIL SPRING
M18	QBA51278	SPRING
M19	RUW144ZA	COIL SPRING
M20	RUW139ZA	SPRING
M21	RFM138ZA	MOTOR
M22	1UE0015ZA	PLUNGER
M23	RUB428Z	LEVER
M24	RUL1030ZC	ANGLE
M25	RMD5017ZA	ANGLE
M26	RDG5927ZA	GEAR
M27	1DW0037ZA	FLYWHEEL ASS'Y
M27-1	RNW139ZA	WASHER
M28	RHM278ZA	SPACER
M29	1DG0006ZA	GEAR ASS'Y
M30	RUB513ZC	LEVER
M31	1UB0091ZA	LEVER
M31-1	RUW146ZA	COIL SPRING
M32	1DR0011ZA	PULLEY ASS'Y
M33	RDV90ZB	BELT
M34	RDG5769ZA	GEAR
M35	RUQ10Z	SPRING
M36	RUW145ZA	COIL SPRING
M37	1UB0090ZA	ROD
M37-1	RUB512ZB	LEVER
M38	RDG5773Z	GEAR
M39	RUQ30Z	SPRING
M40	RUS609Z	SPRING
M41	RUB514ZB	LEVER
M42	RUW147ZA	COIL SPRING
M44	RUB509ZA	LEVER
M45	RDV109ZA	BELT
M46	RUB541Z	LEVER
M47	RUB542Z	LEVER
M48	RUB167ZA	LEVER
M49	RHG3032Z	RUBBER CUSHION
M50	RNL180ZA	LEVER
M101	QHQ1361A	SCREW
M102	RHE5201ZA	SCREW
M103	XTN26+7J	SCREW
M104	XTN26+16F	SCREW
M105	XTW2+8S	SCREW
M106	XYC2+JF16	SCREW
M107	XSN26+3	SCREW
M108	XTN2+5F	SCREW

MECHANICAL PARTS LOCATION

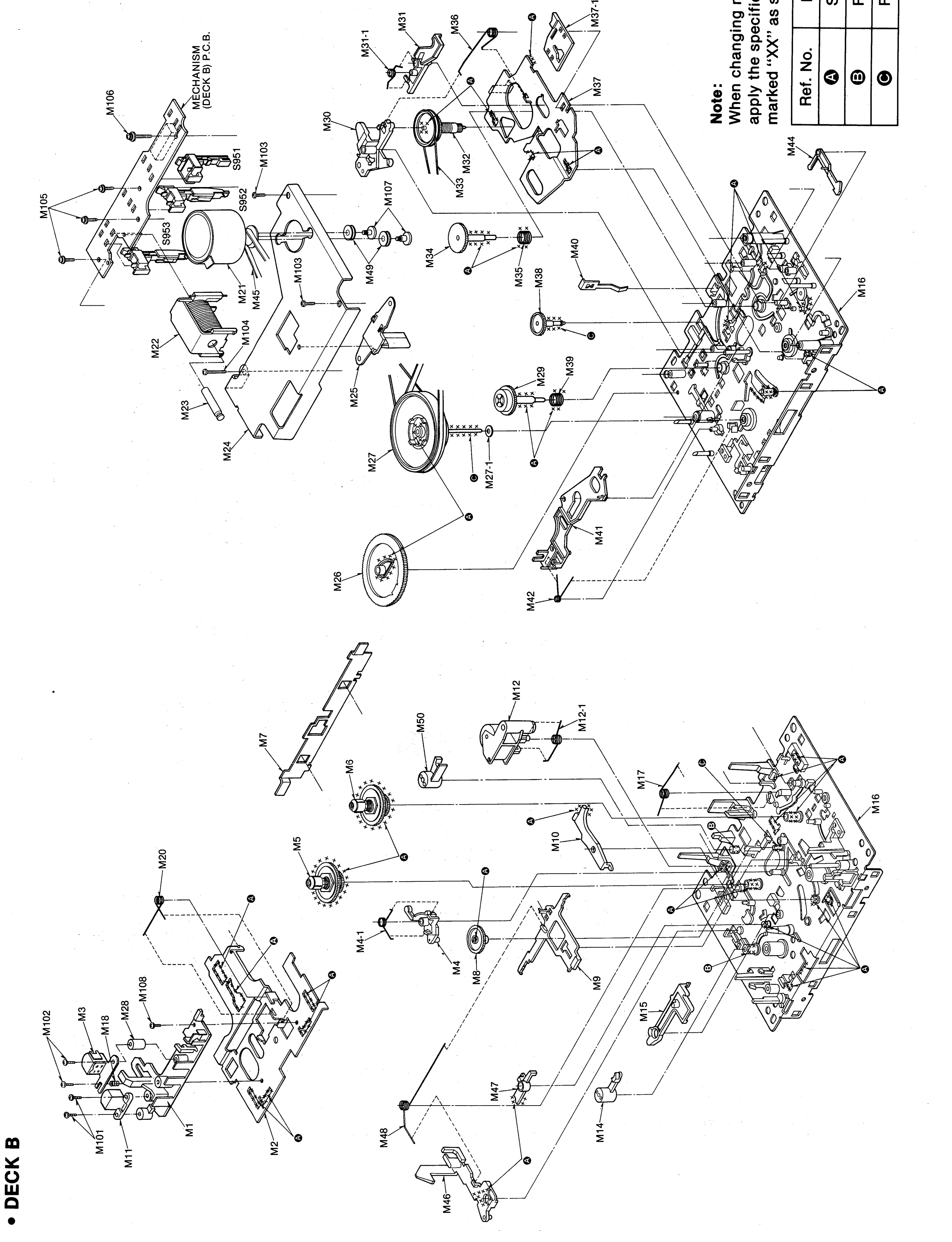
Note:
When changing mechanism parts, apply the specified grease to areas marked "XX" as shown in the drawing.

Ref. No.	Part No.
Ⓐ	SZZ0L18
Ⓑ	RZZ0L05
Ⓒ	RZZ0L02

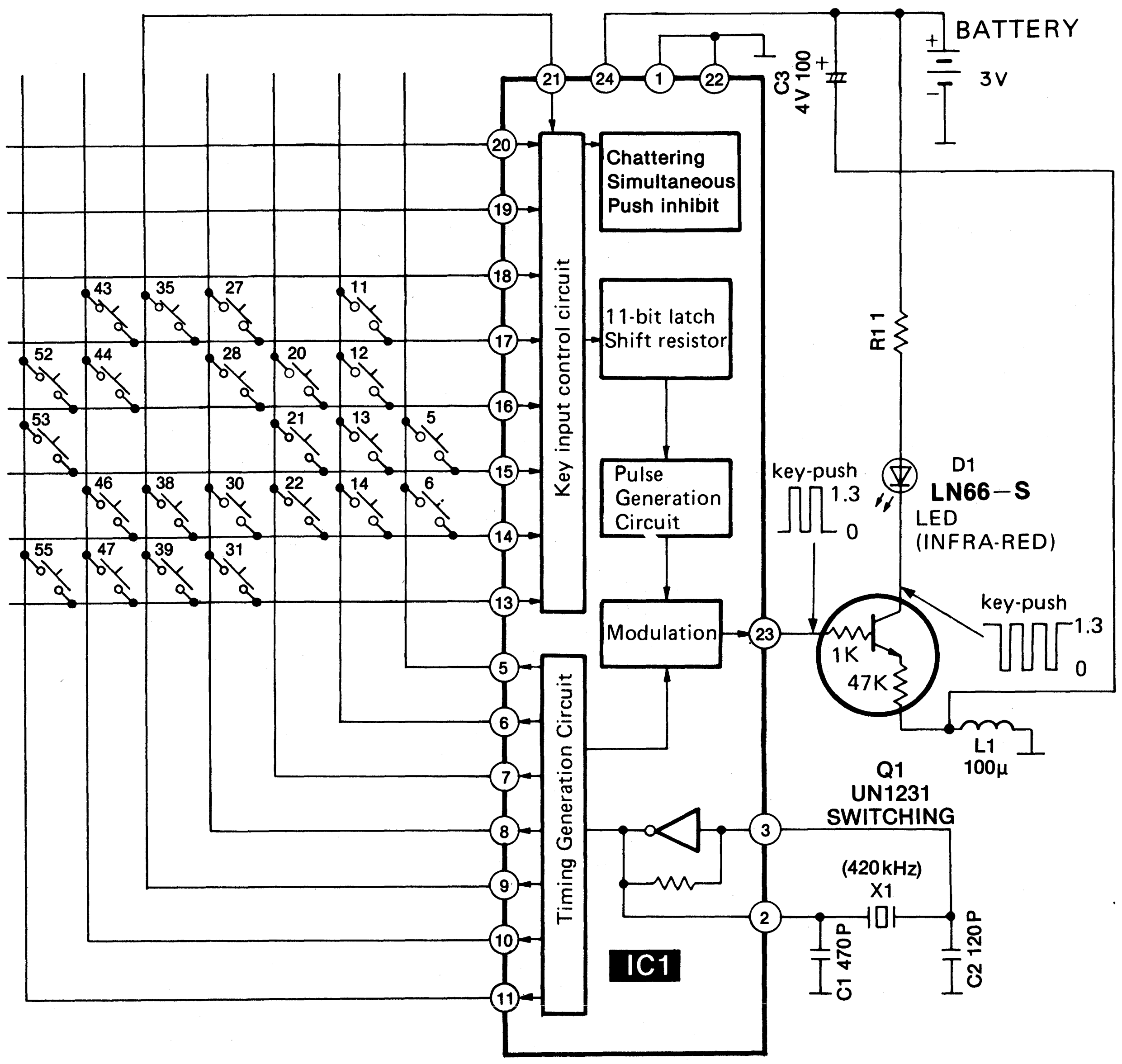
• DECK A


M106
MECHANISM (DECK A) P.C.B.
S973
M105
S971
M103
S972
S974
M21
M45
M22
M104
M23
M24
M30
M31-1
M31
M36
M37-1
M37
M32
M33
M107
M34
M35
M49
M40
M38
M25
M29
M39
M27
M27-1
M26
M41
M42
M44
M16
M7
M13
M19
M12
M12-1
M50
M6
M17
M5
M10
M20
M4-1
M4
M8
M9
M15
M14
M102
M3
M18
M28
M108
M1
M101
M11
M2
1
2
3
4
5
6
A
B
C
D
E

• DECK B


M106
MECHANISM (DECK B) P.C.B.
M105
S951
M103
S952
S953
M21
M45
M22
M104
M23
M24
M30
M31-1
M31
M36
M37-1
M37
M32
M33
M107
M34
M35
M49
M40
M38
M25
M29
M39
M27
M27-1
M26
M41
M42
M44
M16
M7
M12
M12-1
M50
M6
M17
M5
M10
M20
M4-1
M4
M8
M9
M15
M14
M47
M48
M46
M102
M3
M18
M28
M108
M1
M101
M11
M2
F
G
H
I
J

■ SCHEMATIC DIAGRAM OF REMOTE-CONTROL TRANSMITTER

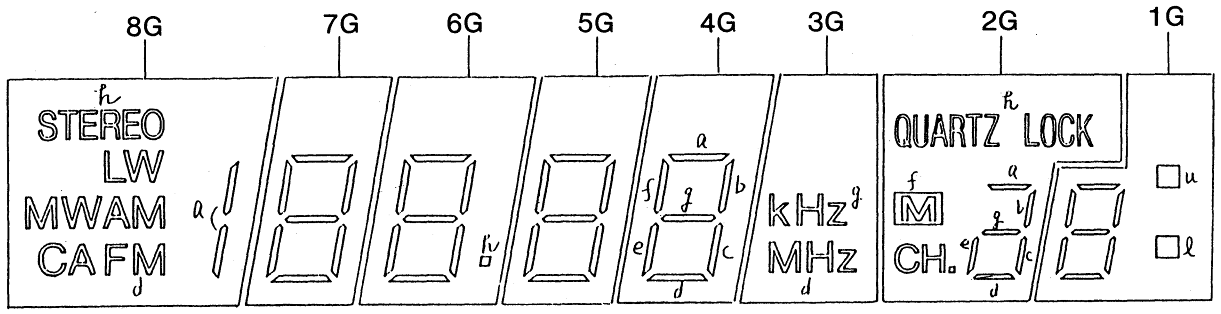

BATTERY
3V
C3 4V 100
Chattering Simultaneous Push inhibit
11-bit latch Shift resistor
Pulse Generation Circuit
Modulation
Key input control circuit
Timing Generation Circuit
IC1
R11
D1
LN66–S
LED (INFRA-RED)
key-push
1.3
0
1K
47K
Q1
UN1231
SWITCHING
L1
100μ
(420kHz)
X1
C1 470P
C2 120P
21 24 1 22 20 19 18 17 16 15 14 13 5 6 7 8 9 10 11 23 3 2
43 35 27 11 52 44 28 20 12 53 21 13 5 46 38 30 22 14 6 55 47 39 31

IC1
M50467018FP

Key No.	Function	Key No.	Function	Key No.	Function
5	VOLUME ▲ UP	22	TUNER 7	43	CD SKIP/SEARCH ▶▶I
6	TUNER 5	27	CD ■ STOP	44	TAPE ■ STOP
11	CD ▶ PLAY/II PAUSE	28	TAPE ▶▶ FF	46	TUNER 0
12	TAPE ▶ PLAY	30	TUNER 8	47	TUNER 3
13	VOLUME ▼ DOWN	31	TUNER 1	52	TAPE DECK A●REC PAUSE
14	TUNER 6	35	CD SKIP/SEARCH I◀◀	53	TAPE DECK A/B
20	TAPE ◀◀ REW	38	TUNER 9	55	TUNER 4
21	AUDIO MUTING −20dB	39	TUNER 2		

■ INTERNAL CONNECTION OF FL

●GRID ASSIGNMENT

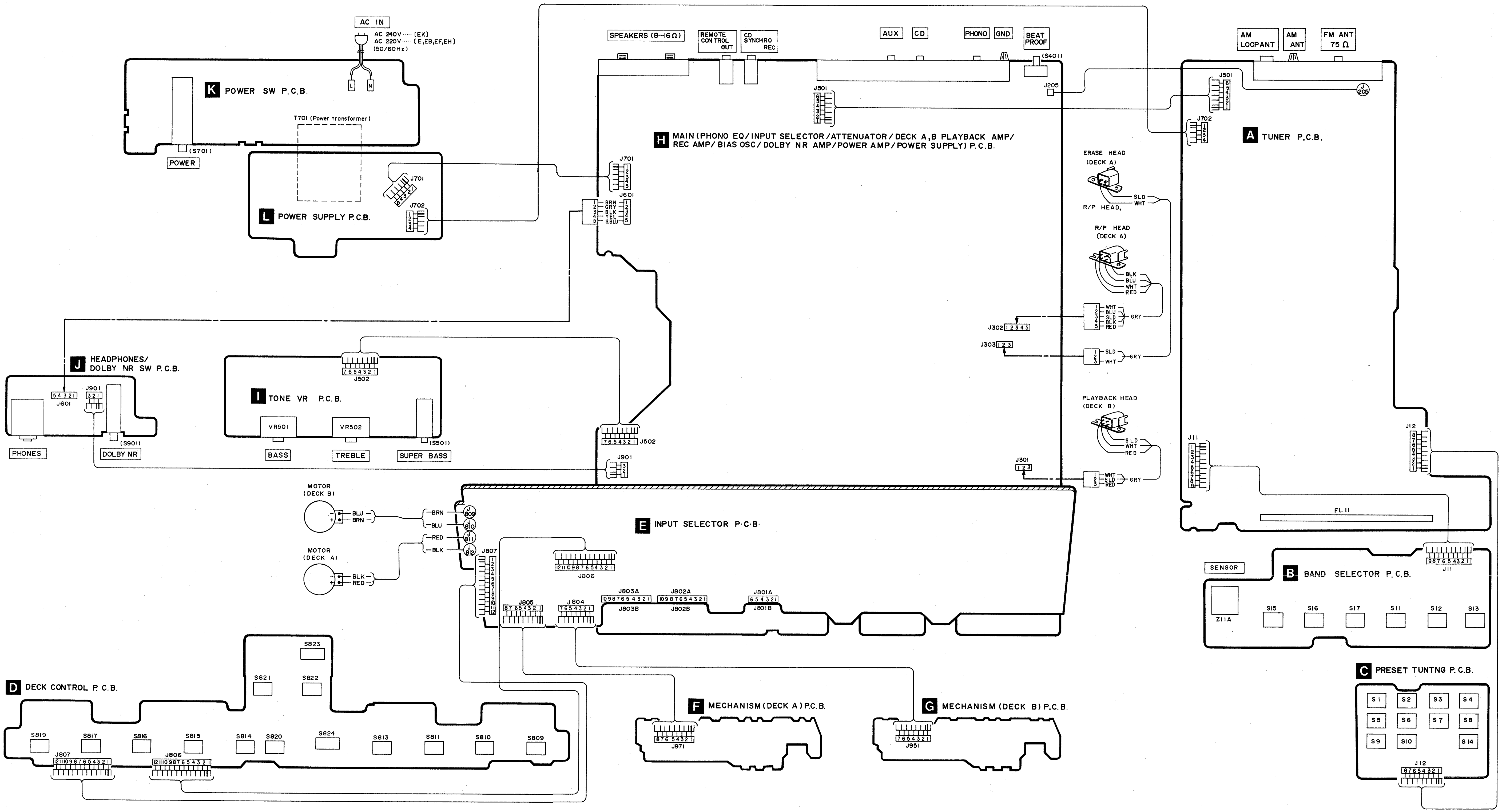

8G
7G
6G
5G
4G
3G
2G
1G
STEREO
LW
MWAM
CA FM
kHz
MHz
QUARTZ LOCK
M
CH.
h
a
b
c
d
e
f
g
u
ℓ

Note: The grid of 3G and 8G are used for external connection.

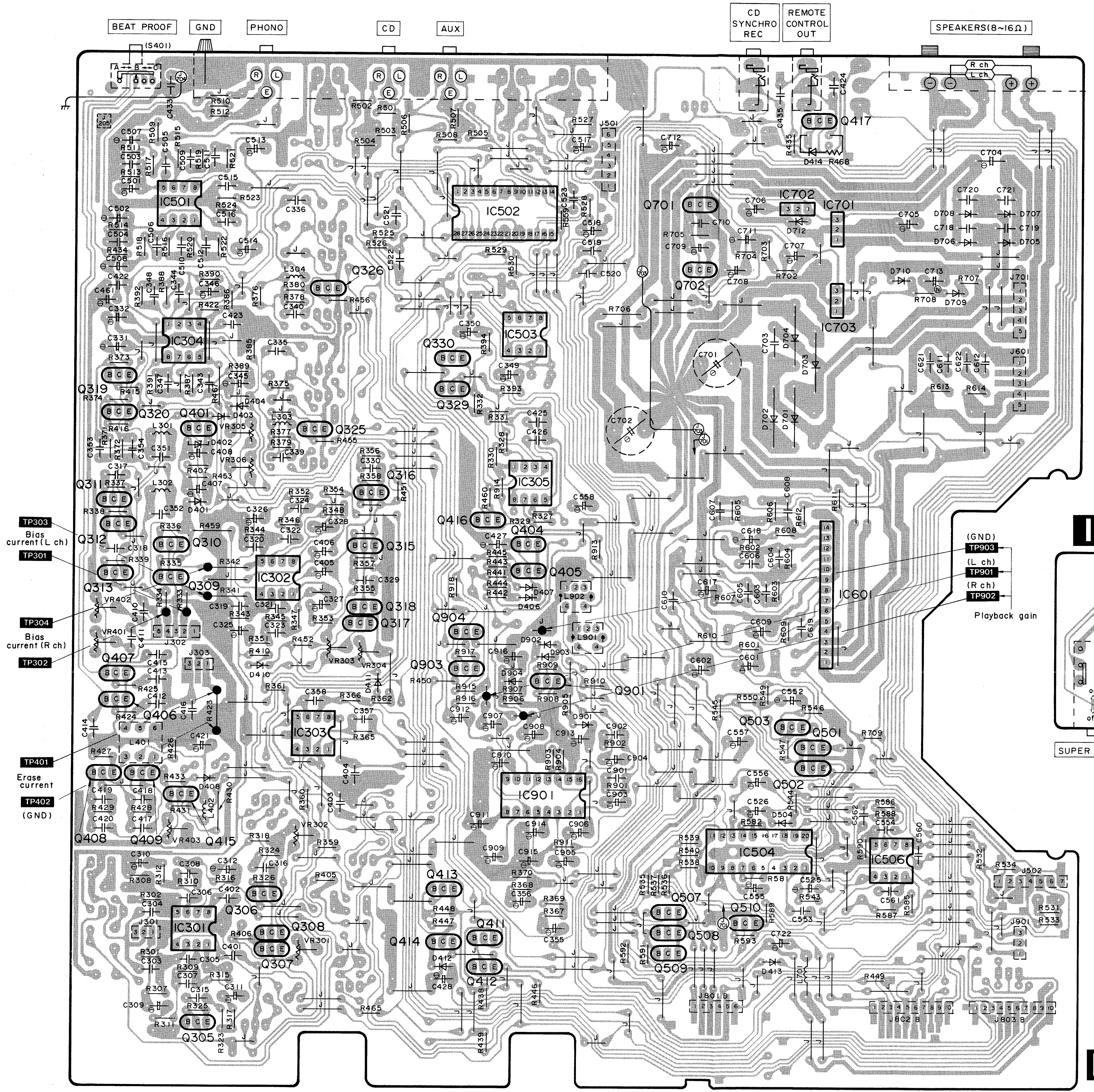
●PIN CONNECTION

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
CONNECTION	F1	F1	NP	h	f	8G	AM	MW	CA	LW	7G	c	a	6G	e	d	g	5G	b	NP	4G	NP	NP	3G	NP	NP	CH	2G	NP	u	1G	ℓ	NP	F2	F2

■PRINTED CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

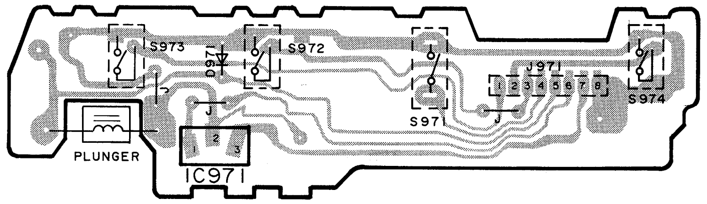

AC IN
AC 240V······(EK)
AC 220V······(E,EB,EF,EH)
(50/60Hz)
K POWER SW P.C.B.
T701 (Power transformer)
(S701)
POWER
L POWER SUPPLY P.C.B.
J701
J702
SPEAKERS (8~16Ω)
REMOTE CONTROL OUT
CD SYNCHRO REC
AUX
CD
PHONO
GND
BEAT PROOF
(S401)
J205
J501
H MAIN (PHONO EQ/INPUT SELECTOR/ATTENUATOR/DECK A,B PLAYBACK AMP/REC AMP/BIAS OSC/DOLBY NR AMP/POWER AMP/POWER SUPPLY) P.C.B.
J601
BRN
GRY
BLK
YEL
SBLU
AM LOOPANT
AM ANT
FM ANT 75Ω
J702
A TUNER P.C.B.
J200
ERASE HEAD (DECK A)
SLD
WHT
R/P HEAD,
R/P HEAD (DECK A)
BLK
BLU
WHT
RED
GRY
J302
J303
PLAYBACK HEAD (DECK B)
J301
J11
J12
FL11
J HEADPHONES/DOLBY NR SW P.C.B.
J601
J901
(S901)
PHONES
DOLBY NR
I TONE VR P.C.B.
J502
VR501
VR502
(S501)
BASS
TREBLE
SUPER BASS
J901
MOTOR (DECK B)
MOTOR (DECK A)
BLU
BRN
RED
BLK
J809
J810
J811
J812
J807
E INPUT SELECTOR P.C.B.
J806
J805
J804
J803A
J803B
J802A
J802B
J801A
J801B
SENSOR
B BAND SELECTOR P.C.B.
J11
Z11A
S15
S16
S17
S11
S12
S13
C PRESET TUNTNG P.C.B.
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S14
J12
D DECK CONTROL P.C.B.
S823
S821
S822
S819
S817
S816
S815
S814
S820
S824
S813
S811
S810
S809
J807
J806
F MECHANISM (DECK A) P.C.B.
J971
G MECHANISM (DECK B) P.C.B.
J951

■PRINTED CIRCUIT BOARDS

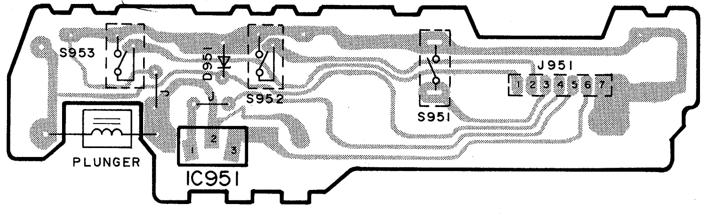

BEAT PROOF
(S401)
GND
PHONO
CD
AUX
CD SYNCHRO REC
REMOTE CONTROL OUT
SPEAKERS(8~16Ω)
R ch
L ch
TP303
Bias current (L ch)
TP301
TP304
Bias current (R ch)
TP302
TP401
Erase current
TP402
(GND)
(GND)
TP903
(L ch)
TP901
(R ch)
TP902
Playback gain
IC501
IC502
IC503
IC304
IC305
IC302
IC303
IC901
IC301
IC504
IC506
IC601
IC701
IC702
IC703
J501
J701
J601
J302
J303
J801 B
J802 B
J803 B
J502
J901

H MAIN (PHONO EQ/ INPUT SELECTOR/ATTENUATOR/ DECK A,B PLAYBACK AMP/ REC AMP/BIAS OSC/ DOLBY NR AMP/ POWER AMP/POWER SUPPLY) P.C.B

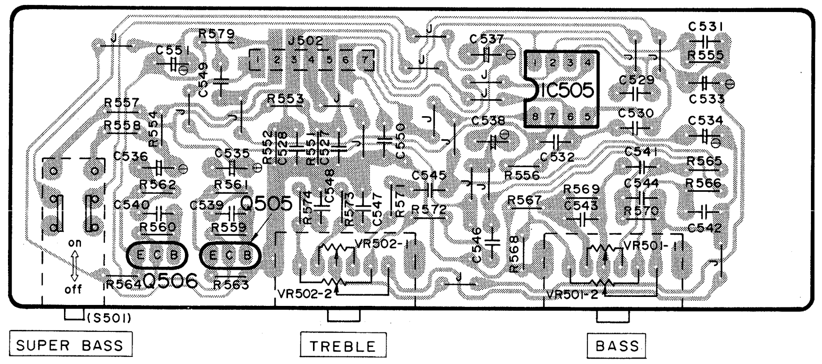
F MECHANISM (DECK A) P.C.B.


S973
D971
S972
J971
S974
S97
PLUNGER
IC971

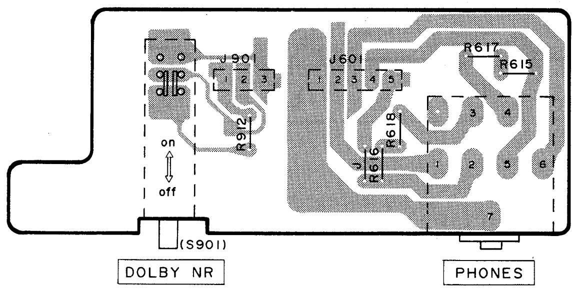
G MECHANISM (DECK B) P.C.B.

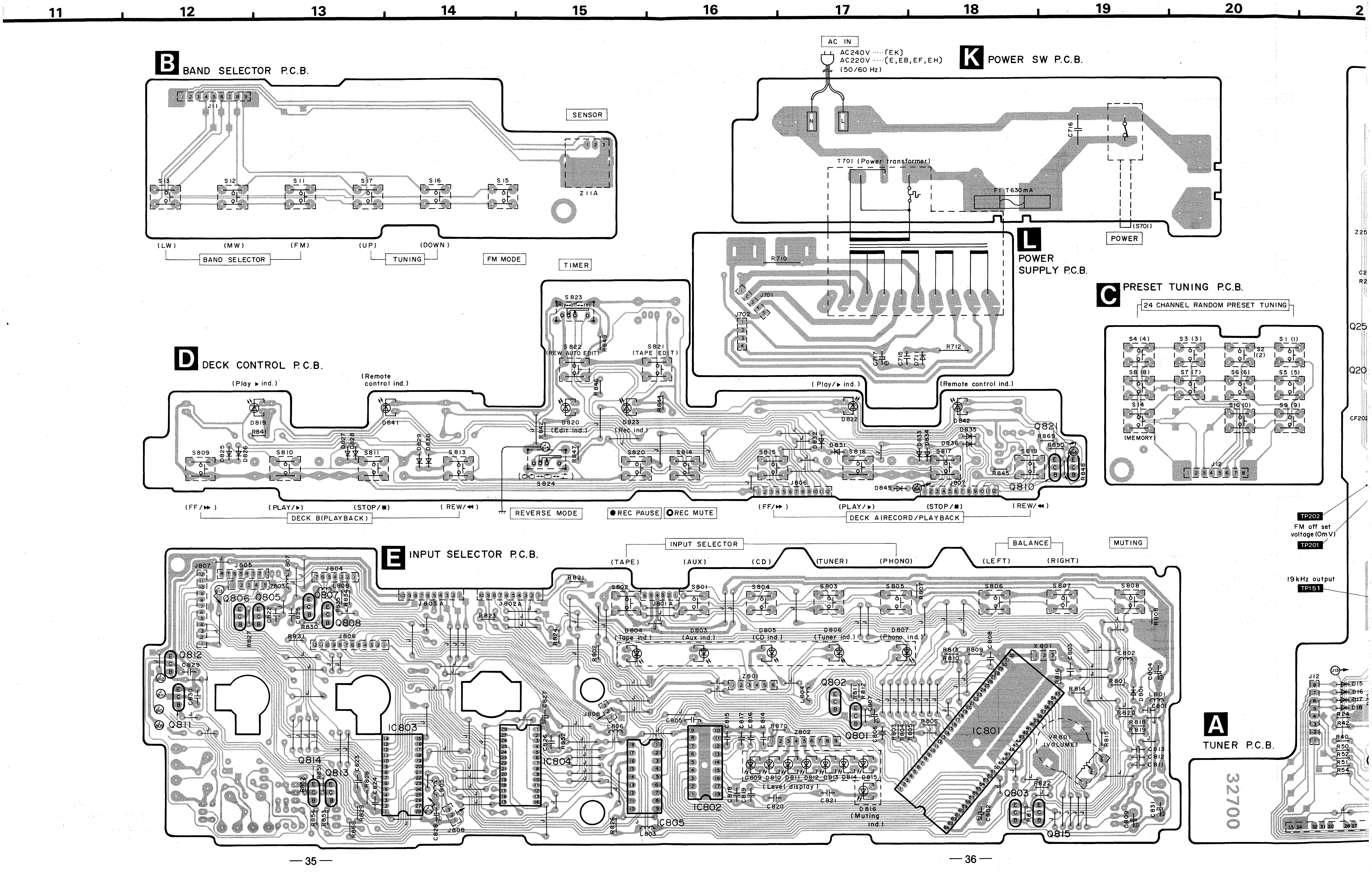

S953
D951
S952
J951
S951
PLUNGER
IC951

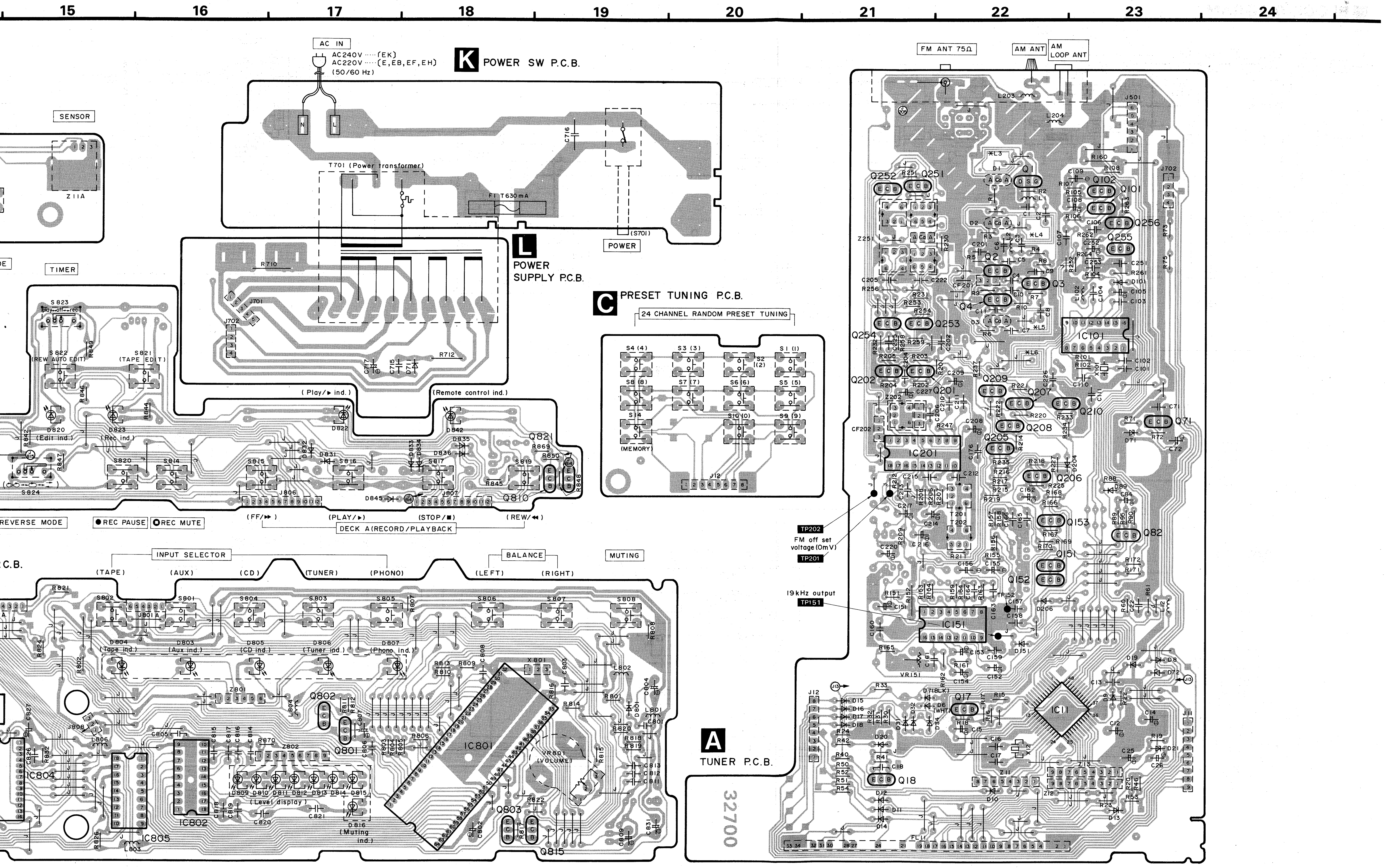
I TONE VR P.C.B.


J502
IC505
Q505
Q506
VR502-1
VR502-2
VR501-1
VR501-2
on
off
(S501)
SUPER BASS
TREBLE
BASS

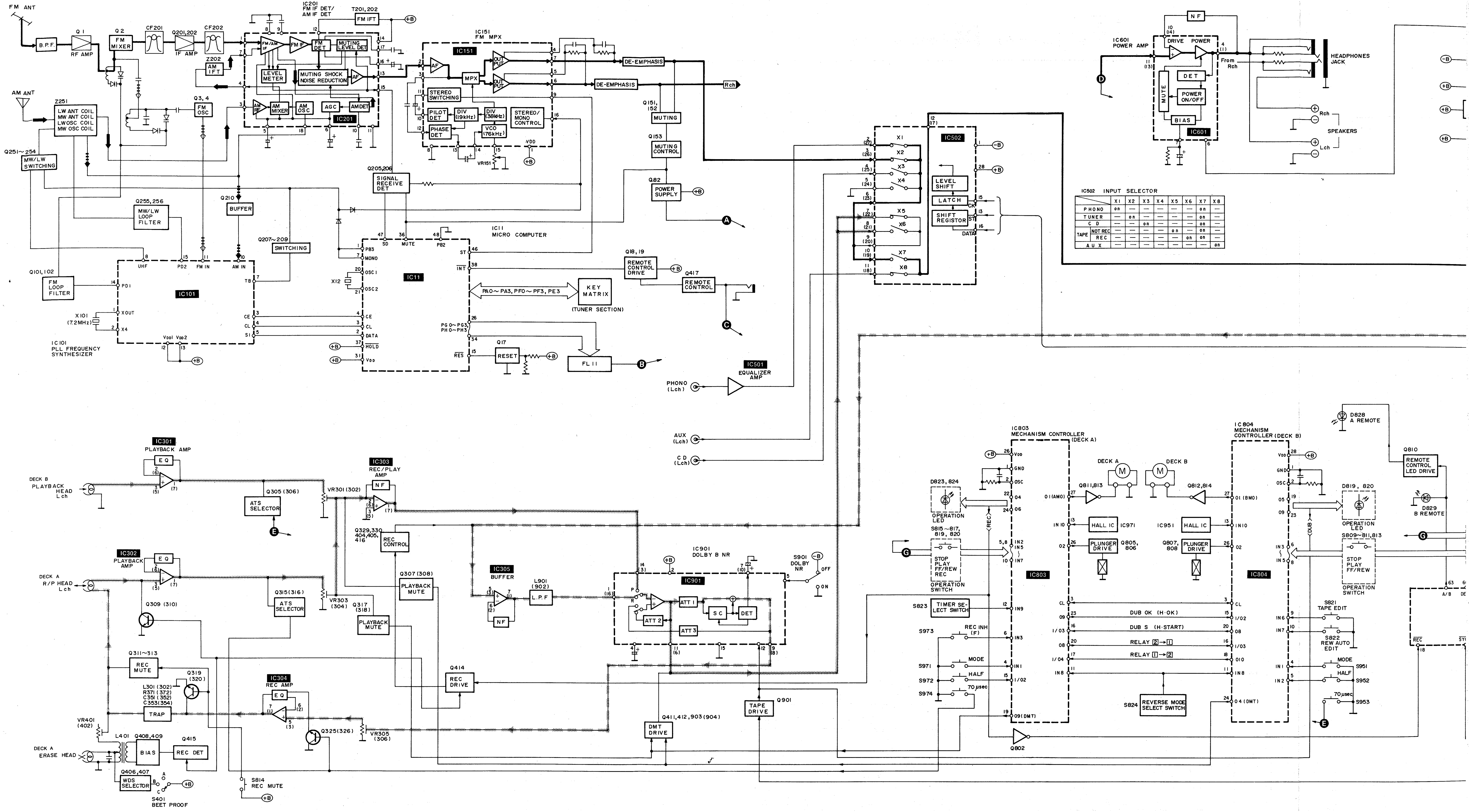
J HEADPHONES/ DOLBY NR SW P.C.B.


J901
J601
R617
R615
R912
R618
R616
on
off
(S901)
DOLBY NR
PHONES


11
12
13
14
15
16
17
18
19
20
B BAND SELECTOR P.C.B.
J11
SENSOR
Z11A
S13
S12
S11
S17
S16
S15
(LW)
(MW)
(FM)
BAND SELECTOR
(UP)
(DOWN)
TUNING
FM MODE
TIMER
AC IN
AC240V ····· (EK)
AC220V ····· (E, EB, EF, EH)
(50/60 Hz)
K POWER SW P.C.B.
N
L
C716
T701 (Power transformer)
F1 T630mA
(S701)
POWER
L POWER SUPPLY P.C.B.
R710
J701
J702
C717
C715
D711
R712
C PRESET TUNING P.C.B.
24 CHANNEL RANDOM PRESET TUNING
S4 (4)
S3 (3)
S1 (1)
S2 (2)
S8 (8)
S7 (7)
S6 (6)
S5 (5)
S14
S10 (0)
S9 (9)
(MEMORY)
J12
D DECK CONTROL P.C.B.
S823
play←off→rec
S822 (REW AUTO EDIT)
S821 (TAPE EDIT)
R849
R846
R844
(Play ▸ ind.)
(Remote control ind.)
D819
R841
D841
D820 (Edit ind.)
D823 (Rec ind.)
R842
R847
S824
D822
D842
D835
D836
Q821
R869
R850
R848
S809
D825
D826
S810
D827
D828
S811
D829
D830
S813
S820
S814
S815
D832
D831
S816
D833
D834
S817
S819
R845
Q810
J806
J807
D845
(FF/▸▸)
(PLAY/▸)
(STOP/■)
(REW/◂◂)
DECK B (PLAYBACK)
REVERSE MODE
● REC PAUSE
○ REC MUTE
DECK A (RECORD/PLAYBACK)
TP202
FM off set voltage (0mV)
TP201
19kHz output
TP151
E INPUT SELECTOR P.C.B.
INPUT SELECTOR
(TAPE)
(AUX)
(CD)
(TUNER)
(PHONO)
BALANCE
(LEFT)
(RIGHT)
MUTING
J807
J805
J804
L807
Z803
L808
Q806
Q805
Q807
Q808
R827
C822
C825
R830
R834
R835
J803A
J802A
R821
R823
R824
R802
S802
S801
J801A
S804
S803
S805
R807
S806
S807
S808
R808
D804 (Tape ind.)
D803 (Aux ind.)
D805 (CD ind.)
D806 (Tuner ind.)
D807 (Phono ind.)
R831
J806
Q812
C829
C830
Q811
Z801
L804
Q802
R811
C807
Q801
R813
R809
R810
C808
X801
C803
L802
C804
D801
R814
R816
R801
L801
C801
R820
R818
R819
IC801
VR801 (VOLUME)
R815
C813
C812
C811
R822
Q803
C802
R817
Q815
C809
C831
IC803
IC804
C827
C826
R832
J808
L806
C805
C815
C817
C816
C814
R870
Z802
IC805
IC802
C806
R803
R804
R805
R806
D809
D810
D811
D812
D813
D814
D815
(Level display)
C818
C819
C820
C821
D816 (Muting ind.)
Q814
Q813
R851
R852
C823
R828
C824
R854
R853
R868
C828
L805
R826
L803
A TUNER P.C.B.
32700
J12
D15
D16
D17
D18
R24
R42
R40
R50
R52
R51
R54
Z25
Q25
Q20
CF202

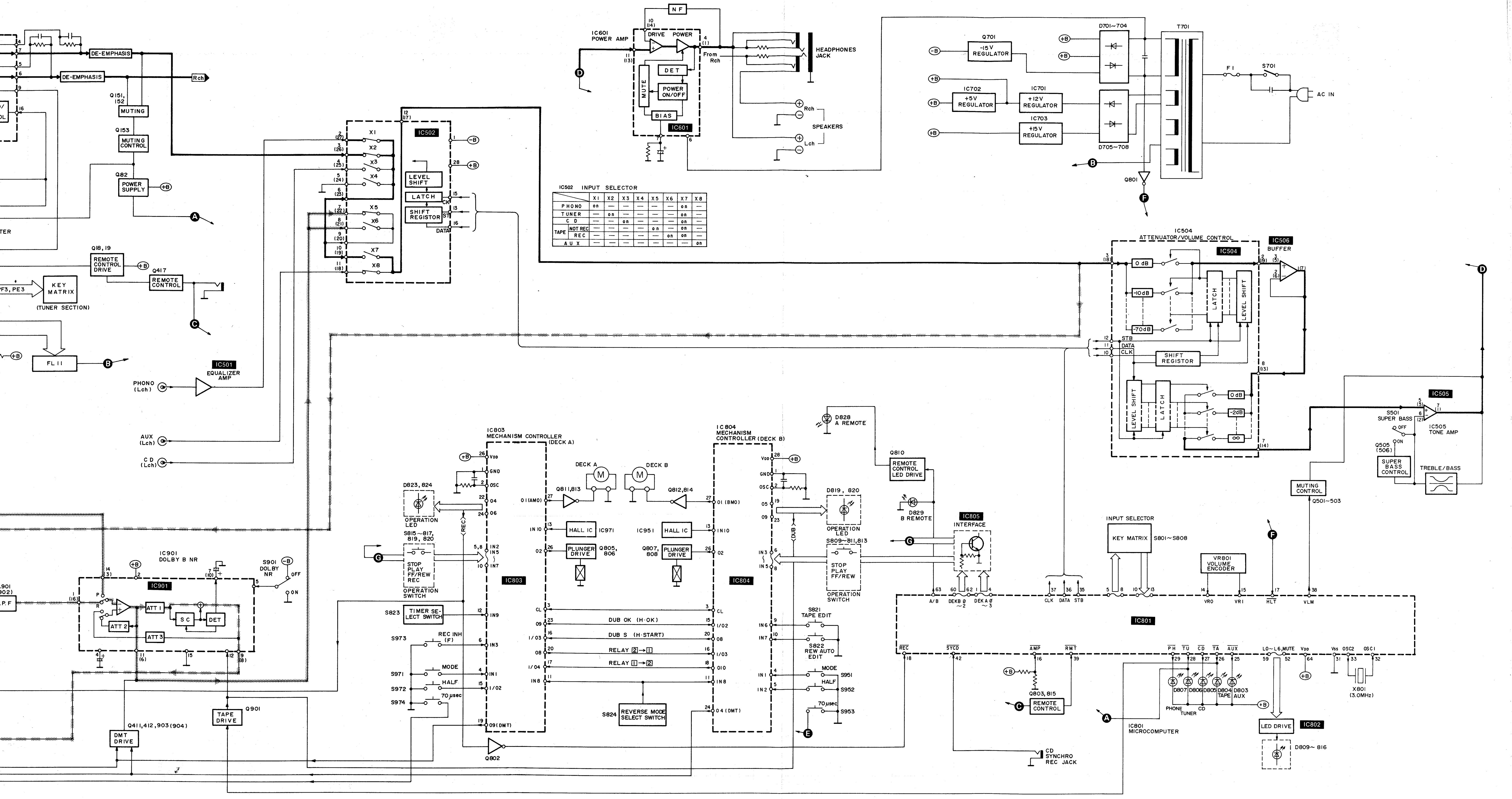

15
16
17
18
19
20
21
22
23
24
AC IN
AC240V ····· (EK)
AC220V ····· (E, EB, EF, EH)
(50/60 Hz)
K POWER SW P.C.B.
T701 (Power transformer)
F1 T630mA
(S701)
POWER
L POWER SUPPLY P.C.B.
C PRESET TUNING P.C.B.
24 CHANNEL RANDOM PRESET TUNING
S4 (4)
S3 (3)
S2 (2)
S1 (1)
S8 (8)
S7 (7)
S6 (6)
S5 (5)
S14
S10 (0)
S9 (9)
(MEMORY)
J12
SENSOR
Z11A
TIMER
REVERSE MODE
● REC PAUSE
○ REC MUTE
S823
S822 (REW AUTO EDIT)
S821 (TAPE EDIT)
D820 (Edit ind.)
D823 (Rec ind.)
S824
(Play/► ind.)
(Remote control ind.)
D822
D842
Q821
Q810
S820
S814
S815
S816
S817
S819
J806
J807
(FF/►►)
(PLAY/►)
(STOP/■)
(REW/◄◄)
DECK A (RECORD/PLAYBACK)
INPUT SELECTOR
(TAPE)
(AUX)
(CD)
(TUNER)
(PHONO)
BALANCE
(LEFT)
(RIGHT)
MUTING
S802
S801
S804
S803
S805
S806
S807
S808
D804 (Tape ind.)
D803 (Aux ind.)
D805 (CD ind.)
D806 (Tuner ind.)
D807 (Phono ind.)
Z801
Q802
Q801
IC801
X801
VR801 (VOLUME)
IC804
IC805
IC802
Z802
D809 D810 D811 D812 D813 D814 D815
(Level display)
D816 (Muting ind.)
Q803
Q815
FM ANT 75Ω
AM ANT
AM LOOP ANT
L203
L204
J501
J702
Q252
Q251
Q1
Q102
Q101
Q256
Q255
Q2
Q3
Q4
Q253
IC101
Q254
Q202
Q201
Q209
Q207
Q210
Q71
Q208
Q205
IC201
Q206
TP202
FM off set voltage (0mV)
TP201
Q153
Q82
Q151
Q152
19kHz output
TP151
IC151
TP152
IC11
Q17
Q18
A TUNER P.C.B.
32700
FL11

BLOCK DIAGRAM


FM ANT
B.P.F.
Q1
RF AMP
Q2
FM MIXER
CF201
Q201,202
IF AMP
CF202
IC201
FM IF DET/
AM IF DET
T201,202
FM IFT
FM/AM IF
FM IF
FM DET
MUTING LEVEL DET
LEVEL METER
MUTING SHOCK NOISE REDUCTION
AF
Z202
AM IFT
Q3,4
FM OSC
AM RF
AM MIXER
AM OSC
AGC
AM DET
IC201
AM ANT
Z251
LW ANT COIL
MW ANT COIL
LWOSC COIL
MW OSC COIL
Q251~254
MW/LW SWITCHING
IC151
FM MPX
IC151
AF
MPX
OUT PUT
STEREO SWITCHING
PILOT DET
DIV (19kHz)
DIV (38kHz)
STEREO/MONO CONTROL
PHASE DET
VCO (76kHz)
VR151
VDD
DE-EMPHASIS
DE-EMPHASIS
Rch
Q151,152
MUTING
Q153
MUTING CONTROL
Q82
POWER SUPPLY
Q205,206
SIGNAL RECEIVE DET
Q210
BUFFER
Q255,256
MW/LW LOOP FILTER
Q207~209
SWITCHING
IC11
MICRO COMPUTER
SD
MUTE
PB2
PB3
MONO
OSC1
OSC2
X12
IC11
ST
INT
KEY MATRIX
(TUNER SECTION)
PA0~PA3, PF0~PF3, PE3
CE
CL
DATA
HOLD
VDD
PG0~PG3, PH0~PH3
RES
Q17
RESET
FL11
Q18,19
REMOTE CONTROL DRIVE
Q417
REMOTE CONTROL
Q101,102
FM LOOP FILTER
UHF
PD2
FM IN
AM IN
PD1
XOUT
X4
TB
IC101
X101 (7.2MHz)
CE
CL
SI
VDD1 VDD2
IC101
PLL FREQUENCY SYNTHESIZER
IC501
EQUALIZER AMP
PHONO (Lch)
AUX (Lch)
CD (Lch)
IC502
X1
X2
X3
X4
X5
X6
X7
X8
LEVEL SHIFT
LATCH
SHIFT REGISTOR
CK
ST
DATA
IC601
POWER AMP
DRIVE
POWER
NF
DET
MUTE
POWER ON/OFF
BIAS
IC601
From Rch
HEADPHONES JACK
Rch
Lch
SPEAKERS
IC301
PLAYBACK AMP
EQ
DECK B PLAYBACK HEAD Lch
Q305 (306)
ATS SELECTOR
VR301 (302)
IC303
REC/PLAY AMP
NF
Q329,330, 404,405, 416
REC CONTROL
IC302
PLAYBACK AMP
EQ
DECK A R/P HEAD Lch
Q315(316)
ATS SELECTOR
VR303 (304)
Q317 (318)
PLAYBACK MUTE
Q307 (308)
PLAYBACK MUTE
Q309 (310)
Q311~313
REC MUTE
Q319 (320)
L301 (302)
R371 (372)
C351 (352)
C353(354)
TRAP
IC304
REC AMP
EQ
Q325(326)
VR305 (306)
VR401 (402)
L401
Q408,409
BIAS
Q415
REC DET
DECK A ERASE HEAD
Q406,407
WDS SELECTOR
S401
BEET PROOF
S814
REC MUTE
Q414
REC DRIVE
IC305
BUFFER
NF
L901 (902)
L.P.F
IC901
DOLBY B NR
IC901
ATT 1
ATT 2
ATT 3
SC
DET
S901
DOLBY NR
OFF
ON
Q411,412,903(904)
DMT DRIVE
Q901
TAPE DRIVE
IC803
MECHANISM CONTROLLER (DECK A)
D823, 824
OPERATION LED
S815~817, 819, 820
STOP PLAY FF/REW REC
OPERATION SWITCH
REC
S823
TIMER SELECT SWITCH
S973
REC INH (F)
S971
MODE
S972
HALF
S974
70µsec
IC803
O1 (AMO)
IN10
O2
CL
O9
I/O3
O8
I/O4
IN8
O9 (DMT)
Q802
DECK A
DECK B
Q811,813
Q812,814
HALL IC
IC971
IC951
HALL IC
PLUNGER DRIVE
Q805, 806
Q807, 808
PLUNGER DRIVE
DUB OK (H·OK)
DUB S (H·START)
RELAY 2→1
RELAY 1→2
S824
REVERSE MODE SELECT SWITCH
IC804
MECHANISM CONTROLLER (DECK B)
IC804
O1 (BMO)
IN10
O2
CL
I/O2
O8
I/O3
O10
IN8
O4 (DMT)
D828
A REMOTE
Q810
REMOTE CONTROL LED DRIVE
D819, 820
OPERATION LED
D829
B REMOTE
DUB
S809~811,813
STOP PLAY FF/REW
OPERATION SWITCH
IN3
IN5
IN6
IN7
S821
TAPE EDIT
S822
REW AUTO EDIT
IN1
IN2
MODE
HALF
70µsec
S951
S952
S953
A/B
REC
A
B
C
D
E
G
+B
-B

IC502 INPUT SELECTOR

		X1	X2	X3	X4	X5	X6	X7	X8
PHONO		on	—	—	—	—	—	on	—
TUNER		—	on	—	—	—	—	on	—
CD		—	—	on	—	—	—	on	—
TAPE	NOT REC	—	—	—	—	on	—	on	—
	REC	—	—	—	—	—	on	on	—
AUX		—	—	—	—	—	—	—	on


DE-EMPHASIS
DE-EMPHASIS
Rch
Q151, 152
MUTING
Q153
MUTING CONTROL
Q82
POWER SUPPLY
Q18, 19
REMOTE CONTROL DRIVE
Q417
REMOTE CONTROL
KEY MATRIX
(TUNER SECTION)
PF3, PE3
FL 11
IC501
EQUALIZER AMP
PHONO (Lch)
AUX (Lch)
CD (Lch)
IC502
LEVEL SHIFT
LATCH
SHIFT REGISTOR
X1
X2
X3
X4
X5
X6
X7
X8
CK
ST
DATA
IC601 POWER AMP
NF
DRIVE
POWER
DET
MUTE
POWER ON/OFF
BIAS
IC601
From Rch
HEADPHONES JACK
Rch
Lch
SPEAKERS
Q701
-15V REGULATOR
IC702
+5V REGULATOR
IC701
+12V REGULATOR
IC703
+15V REGULATOR
D701~704
D705~708
T701
F1
S701
AC IN
Q801
IC504 ATTENUATOR/VOLUME CONTROL
IC506
BUFFER
0dB
-10dB
-70dB
LATCH
LEVEL SHIFT
STB
DATA
CLK
SHIFT REGISTOR
-2dB
∞
IC505
IC505 TONE AMP
S501 SUPER BASS
OFF
ON
Q505 (506)
SUPER BASS CONTROL
TREBLE/BASS
MUTING CONTROL
Q501~503
IC901 DOLBY B NR
IC901
ATT 1
ATT 2
ATT 3
SC
DET
S901 DOLBY NR
OFF
ON
L.P.F
TAPE DRIVE
Q901
Q411, 412, 903 (904)
DMT DRIVE
IC803 MECHANISM CONTROLLER (DECK A)
IC803
D823, 824
OPERATION LED
S815~817, 819, 820
STOP PLAY FF/REW REC
OPERATION SWITCH
S823
TIMER SELECT SWITCH
S973
REC INH (F)
S971
S972
S974
MODE
HALF
70μsec
DECK A
DECK B
Q811, 813
Q812, 814
HALL IC
IC971
IC951
HALL IC
PLUNGER DRIVE
Q805, 806
Q807, 808
PLUNGER DRIVE
DUB OK (H-OK)
DUB S (H-START)
RELAY 2→1
RELAY 1→2
S824
REVERSE MODE SELECT SWITCH
Q802
IC804 MECHANISM CONTROLLER (DECK B)
IC804
D819, 820
OPERATION LED
S809~811, 813
STOP PLAY FF/REW
OPERATION SWITCH
S821 TAPE EDIT
S822 REW AUTO EDIT
S951
S952
S953
D828 A REMOTE
Q810
REMOTE CONTROL LED DRIVE
D829 B REMOTE
IC805
INTERFACE
INPUT SELECTOR
KEY MATRIX
S801~S808
VR801 VOLUME ENCODER
IC801
A/B
DEKB Ø ~2
DEKA Ø ~3
CLK
DATA
STB
VRO
VRI
HLT
VLM
REC
SYCD
AMP
RMT
PH
TU
CD
TA
AUX
L0~L6
MUTE
VDD
VSS
OSC2
OSC1
Q803, 815
REMOTE CONTROL
D807
D806
D805
D804
D803
PHONE
TUNER
CD
TAPE
AUX
IC801 MICROCOMPUTER
CD SYNCHRO REC JACK
LED DRIVE
IC802
D809~816
X801 (3.0MHz)

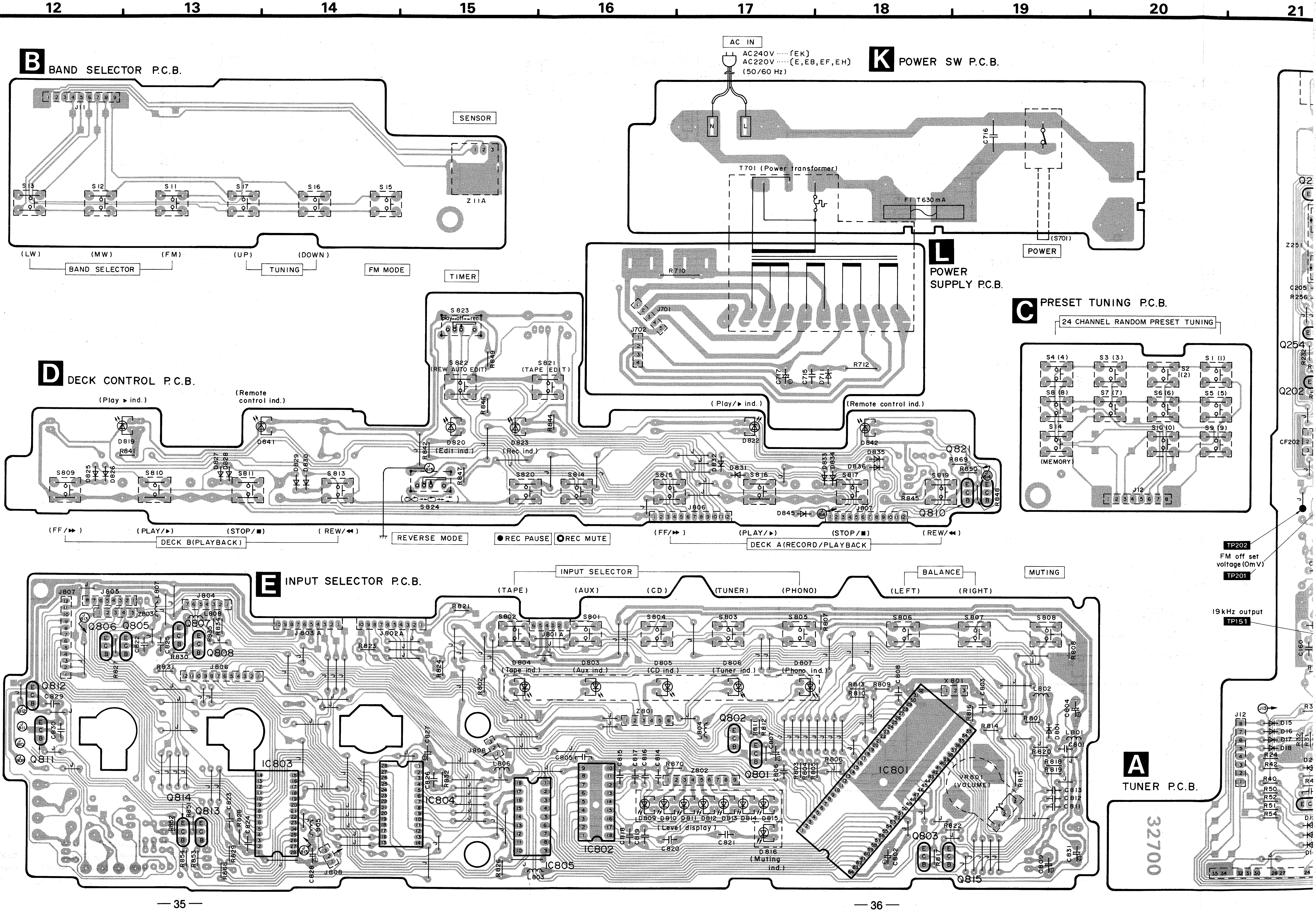
IC502 INPUT SELECTOR

		X1	X2	X3	X4	X5	X6	X7	X8
PHONO		on	—	—	—	—	—	on	—
TUNER		—	on	—	—	—	—	on	—
CD		—	—	on	—	—	—	on	—
TAPE	NOT REC	—	—	—	—	on	—	on	—
	REC	—	—	—	—	—	on	on	—
AUX		—	—	—	—	—	—	—	on

Notes:

※Ref. No. and Pin No. of IC in ( ) stand for is Rch.

※ ——▶	FM Signal	▭▭▭▷	FM OSC Signal
▬▬▶	MW/LW Signal	■■■▶	AM OSC Signal
▨▨▷	Playback Signal	▩▩▷	Recording Signal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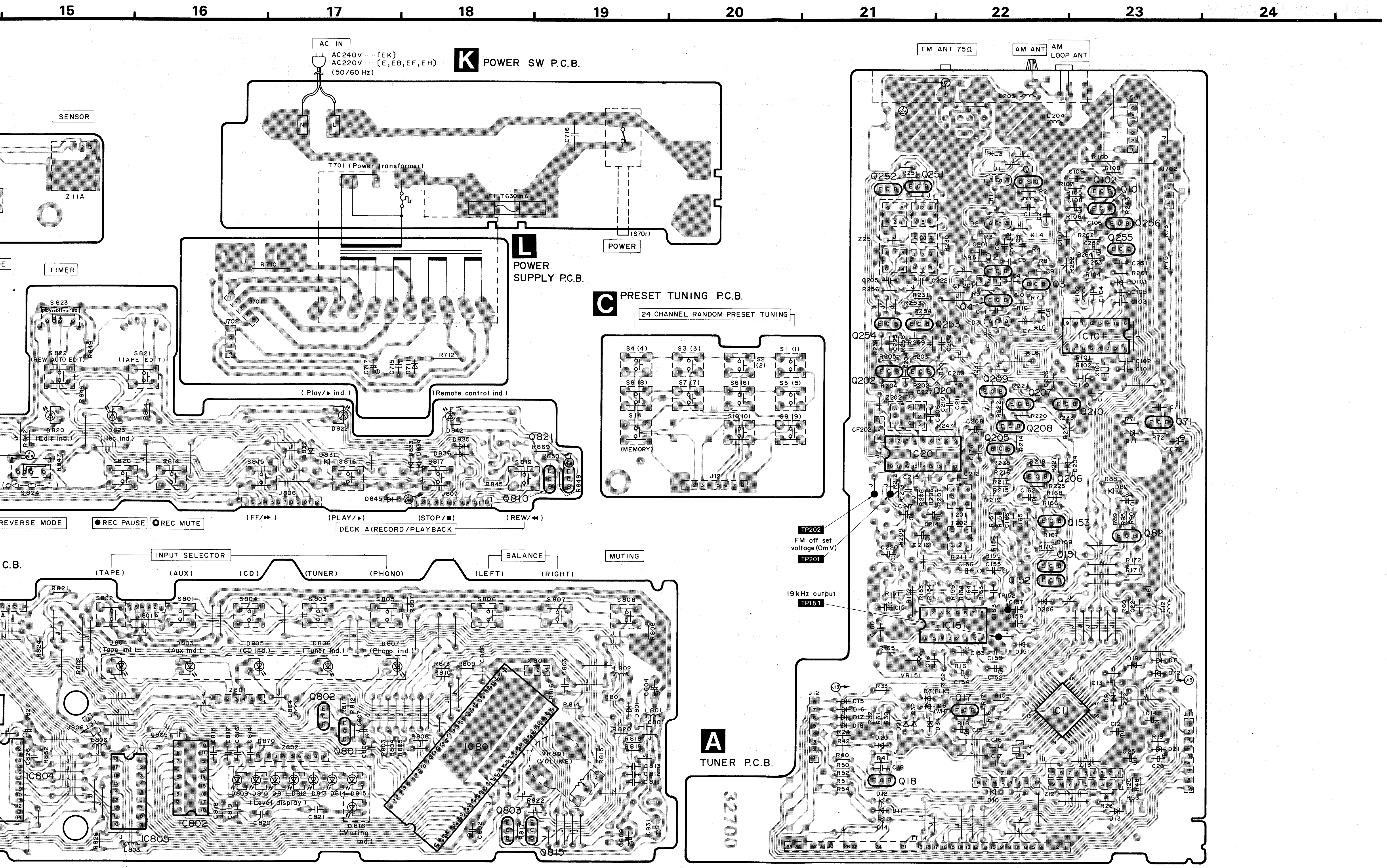
18
19
20
21
B BAND SELECTOR P.C.B.
J11
SENSOR
Z11A
S13
S12
S11
S17
S16
S15
(LW)
(MW)
(FM)
BAND SELECTOR
(UP)
(DOWN)
TUNING
FM MODE
TIMER
AC IN
AC240V ····· (EK)
AC220V ····· (E, EB, EF, EH)
(50/60 Hz)
K POWER SW P.C.B.
N
L
C716
T701 (Power transformer)
F1 T630mA
(S701)
POWER
L POWER SUPPLY P.C.B.
R710
J701
J702
C717
C715
D711
R712
C PRESET TUNING P.C.B.
24 CHANNEL RANDOM PRESET TUNING
S4 (4)
S3 (3)
S2 (2)
S1 (1)
S8 (8)
S7 (7)
S6 (6)
S5 (5)
S14
S10 (0)
S9 (9)
(MEMORY)
J12
D DECK CONTROL P.C.B.
S823
play-off-rec
S822
(REW AUTO EDIT)
S821
(TAPE EDIT)
R849
R846
R844
(Play ▸ ind.)
(Remote control ind.)
D819
R841
D841
D820
(Edit ind.)
D823
(Rec ind.)
R842
R847
S824
(Play/▸ ind.)
D822
(Remote control ind.)
D842
Q821
R869
R850
R848
S809
D825
D826
S810
D827
D828
S811
D829
D830
S813
S820
S814
S815
D832
D831
S816
D833
D834
D835
D836
S817
S819
R845
Q810
J806
D845
J807
(FF/▸▸)
(PLAY/▸)
(STOP/■)
(REW/◂◂)
DECK B(PLAYBACK)
REVERSE MODE
● REC PAUSE
○ REC MUTE
(FF/▸▸)
(PLAY/▸)
(STOP/■)
(REW/◂◂)
DECK A(RECORD/PLAYBACK)
INPUT SELECTOR
(TAPE)
(AUX)
(CD)
(TUNER)
(PHONO)
BALANCE
(LEFT)
(RIGHT)
MUTING
E INPUT SELECTOR P.C.B.
J807
J805
J804
L807
L808
Z803C
Q806
Q805
Q807
Q808
C825
C822
R830
R827
R831
J806
J803 A
J802A
R821
R823
R824
R802
S802
J801 A
S801
S804
S803
S805
R807
S806
S807
S808
R808
D804
(Tape ind.)
D803
(Aux ind.)
D805
(CD ind.)
D806
(Tuner ind.)
D807
(Phono ind.)
Q812
C829
C830
Q811
IC803
IC804
C827
C826
R832
J808
L806
Z801
C805
C815
C817
C816
C814
R870
Z802
L804
Q802
R811
R812
C807
Q801
C806
R803
R804
R805
R806
R813
R809
R810
C808
X801
C803
L802
R816
R814
R801
D801
C804
L801
C801
R820
R818
R819
IC801
VR801
(VOLUME)
R815
C813
C812
C811
Q814
Q813
R852
R851
C823
R828
C824
R854
R853
R866
R829
L805
C828
J808
R826
L803
IC805
IC802
C818
C819
C820
C821
D809
D810
D811
D812
D813
D814
D815
(Level display)
D816
(Muting ind.)
R822
Q803
C802
R817
Q815
C809
C831
A TUNER P.C.B.
32700
TP202
FM off set voltage (OmV)
TP201
19kHz output
TP151
Z251
C205
R256
Q254
R232
Q202
CF202
C160
J12
D15
D16
D17
D18
R24
R42
R40
R50
R52
R51
R54


15
16
17
18
19
20
21
22
23
24
AC IN
AC240V ······ (EK)
AC220V ······ (E, EB, EF, EH)
(50/60 Hz)
K POWER SW P.C.B.
L POWER SUPPLY P.C.B.
T701 (Power transformer)
F1 T630mA
(S701)
POWER
C716
R710
J701
J702
R712
C717
C715
D711
SENSOR
Z11A
TIMER
S823
play-off-rec
S822 (REW AUTO EDIT)
S821 (TAPE EDIT)
D820 (Edit ind.)
D823 (Rec ind.)
D822
(Play/► ind.)
(Remote control ind.)
D842
Q821
S824
S820
S814
S815
S816
S817
S819
Q810
J806
J807
D845
REVERSE MODE
● REC PAUSE
○ REC MUTE
(FF/►►)
(PLAY/►)
(STOP/■)
(REW/◄◄)
DECK A (RECORD/PLAYBACK)
C PRESET TUNING P.C.B.
24 CHANNEL RANDOM PRESET TUNING
S4 (4)
S3 (3)
S2 (2)
S1 (1)
S8 (8)
S7 (7)
S6 (6)
S5 (5)
S14 (MEMORY)
S10 (0)
S9 (9)
J12
INPUT SELECTOR
(TAPE)
(AUX)
(CD)
(TUNER)
(PHONO)
BALANCE
(LEFT)
(RIGHT)
MUTING
S802
S801
S804
S803
S805
S806
S807
S808
D804 (Tape ind.)
D803 (Aux ind.)
D805 (CD ind.)
D806 (Tuner ind.)
D807 (Phono ind.)
Z801
Z802
Q802
Q801
IC801
VR801 (VOLUME)
IC804
IC805
IC802
D809 D810 D811 D812 D813 D814 D815 (Level display)
D816 (Muting ind.)
Q803
Q815
X801
C.B.
A TUNER P.C.B.
32700
FM ANT 75Ω
AM ANT
AM LOOP ANT
L203
L204
J501
J702
Q252
Q251
Q1
Q102
Q101
Q256
Q255
Z251
Q2
Q3
Q4
Q253
Q254
IC101
Q202
Q201
Q209
Q207
Q210
Q208
Q205
Q206
IC201
Q71
CF202
TP202
FM off set voltage (OmV)
TP201
19kHz output
TP151
Q153
Q82
Q151
Q152
IC151
VR151
IC11
Q17
Q18
J13
D7 (BLK)
D6 (WHT)
FL11
Z11
Z12
Z13

■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time switch the development of new technology)

Note 1:

- **S1~10** : Preset tuning switches.
  [S1: CH1, S2: CH2, S3: CH3, S4: CH4,
  S5: CH5, S6: CH6, S7: CH7, S8: CH8,
  S9: CH9, S10: CH0]
- **S11~13** : Band selector switches.
  S11: FM, S12: MW, S13: LW
- **S14** : Memory Switch.
- **S15** : FM mode selector Switch.
- **S16, 17** : Tuning switches.
  S16: UP, S17: DOWN
- **S401** : Beat proof selector switch.
  (A ↔ B ↔ C)
- **S501** : Super bass switch.
  (▮: OFF, ▬: ON)
- **S701** : Power switch.
  (▮: OFF, ▬: ON)
- **S801~805**: Input selector switches.
  [S801: AUX, S802: TAPE, S803: TUNER,
  S804: CD, S805: PHONO]
- **S806, 807** : Balance control switches.
  S806: LEFT, S807: RIGHT
- **S808** : Muting switch.
- **S809, 815** : Fast-forward switch (DECK B/A).
- **S810, 816** : Playback switch (DECK B/A).
- **S811, 817** : Stop switch (DECK B/A).
- **S813, 819** : Rewind switch (DECK B/A).
- **S814** : Record-muting switch (DECK A).
- **S820** : Recording pause switch (DECK A).
- **S821** : Edit-recording switch.
- **S822** : Automatic rewind/edit-recording switch.
- **S823** : Timer stand-by switch.
  (REC ↔ OFF ↔ PLAY)
- **S824** : Playback mode selector switch.
- **S901** : Dolby noise-reduction switch.
  (▮: OFF, ▬: ON)
- **S951, 971** : Mechanical mode detector switch. (DECK B/A)
- **S952, 972** : Mechanical half detector switch. (DECK B/A)
- **S973** : Mechanical rec inhibit detector switch. (DECK A)
- **S953, 974** : Mechanical CrO_2 detector switch. (DECK B/A)
- L3, L4, L5 and L6 are coils formed on the P.C.B. and are thus not found on the replacement parts list.

- Signal line
  ⇨ : FM signal
  ➡ : MW/LW signal
  ░▷ : AF signal (Lch)
  ▨▷ : Tape Record signal
  ▫▫▫▫▷ : FM OSC
  ■■■■▶ : MW/LW OSC
  ░▷ ░▷ : Tape playback signal
  ─□─ /···□··· : Positive and negative voltage line
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts. Indicated voltage values are standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on internal impedance of the DC circuit tester.
- All voltage values shown in circuitry are DC voltage in FM signal (Stereo signal) reception mode.

*Figures in (   ) Stand for DC-voltage in MW signal reception mode
*Figures in [   ] Stand for DC-voltage in LW signal reception mode
*Figures in 《   》 Stand for DC-voltage in playback signal reception mode
*Figures in 〈   〉 Stand for DC-voltage in REC signal reception mode
*Figures in □ Stand for DC-voltage in muting mode.

***Caution!**
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
*Cover the parts boxes made of plastics with alminum foil.
*Ground the soldering iron.
*Put a conductive mat on the work table.
*Do not touch the legs of IC or LSI with the fingers directly.

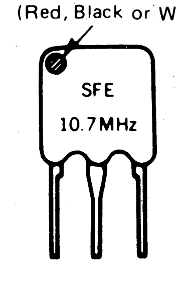
Note 2:

- **Use of ceramic filters in pairs**

The ceramic filters (CF201, CF202) for FM-IF circuit are available in three versions. For this circuit, be sure to use the ceramics of the same version in a pair.

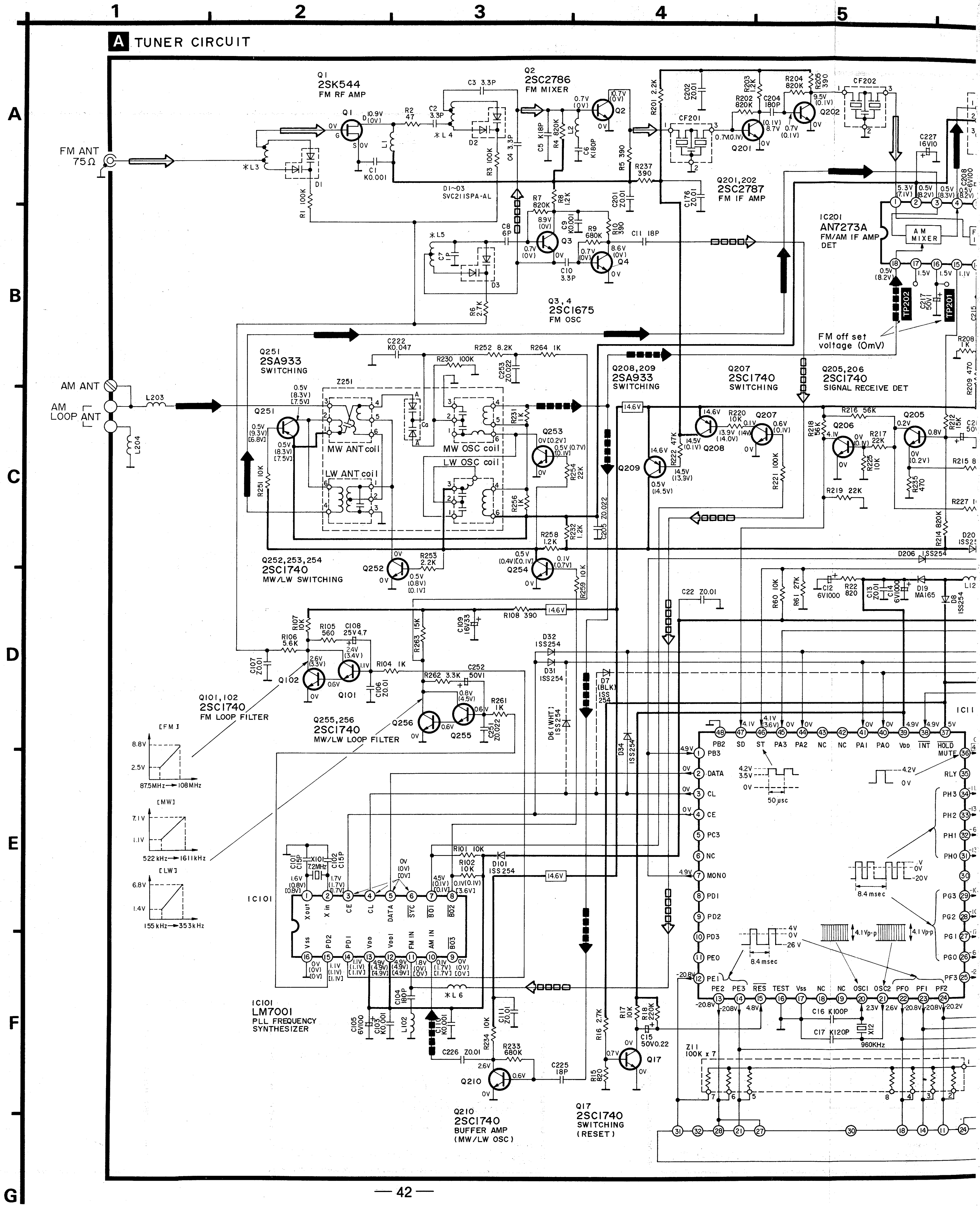
At repairing and replacement, pay close attention to the diodes (D6, D7) for use as different diodes must be used depending on each version of the ceramic filters.

Color marking
(Red, Black or White)



VERSION (Color)	D6	D7	CENTER FREQUENCY
Black	×	○	10.65MHz
Red	×	×	10.70MHz
White	○	×	10.75MHz

Note: ○ mark: Diode is used.
× mark: Diode is not used.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2
3
4
5
A
B
C
D
E
F
G
A TUNER CIRCUIT
FM ANT 75Ω
AM ANT
AM LOOP ANT
Q1 2SK544 FM RF AMP
Q2 2SC2786 FM MIXER
Q3, 4 2SC1675 FM OSC
Q201,202 2SC2787 FM IF AMP
IC201 AN7273A FM/AM IF AMP DET
AM MIXER
CF201
CF202
TP202
TP201
FM off set voltage (0mV)
Q251 2SA933 SWITCHING
Z251
MW ANT coil
LW ANT coil
MW OSC coil
LW OSC coil
Q252,253,254 2SC1740 MW/LW SWITCHING
Q208,209 2SA933 SWITCHING
Q207 2SC1740 SWITCHING
Q205,206 2SC1740 SIGNAL RECEIVE DET
Q101,102 2SC1740 FM LOOP FILTER
Q255,256 2SC1740 MW/LW LOOP FILTER
IC101 LM7001 PLL FREQUENCY SYNTHESIZER
Q210 2SC1740 BUFFER AMP (MW/LW OSC)
Q17 2SC1740 SWITCHING (RESET)
87.5MHz→108MHz
522kHz→1611kHz
155kHz→353kHz
IC11
8.4msec
Z11 100K x 7

ch the

: FM OSC
: MW/LW OSC

: Tape playback
signal
ve voltage line

special characteristics
ny of these components,
Indicated voltage values
d by the DC electronic
chassis taken as
ome errors in the voltage
e of the DC circuit tester.
DC voltage in FM signal

MW signal reception mode
LW signal reception mode
n playback signal reception

n REC signal reception

muting mode.

city.
aking care during repair.
with alminum foil.

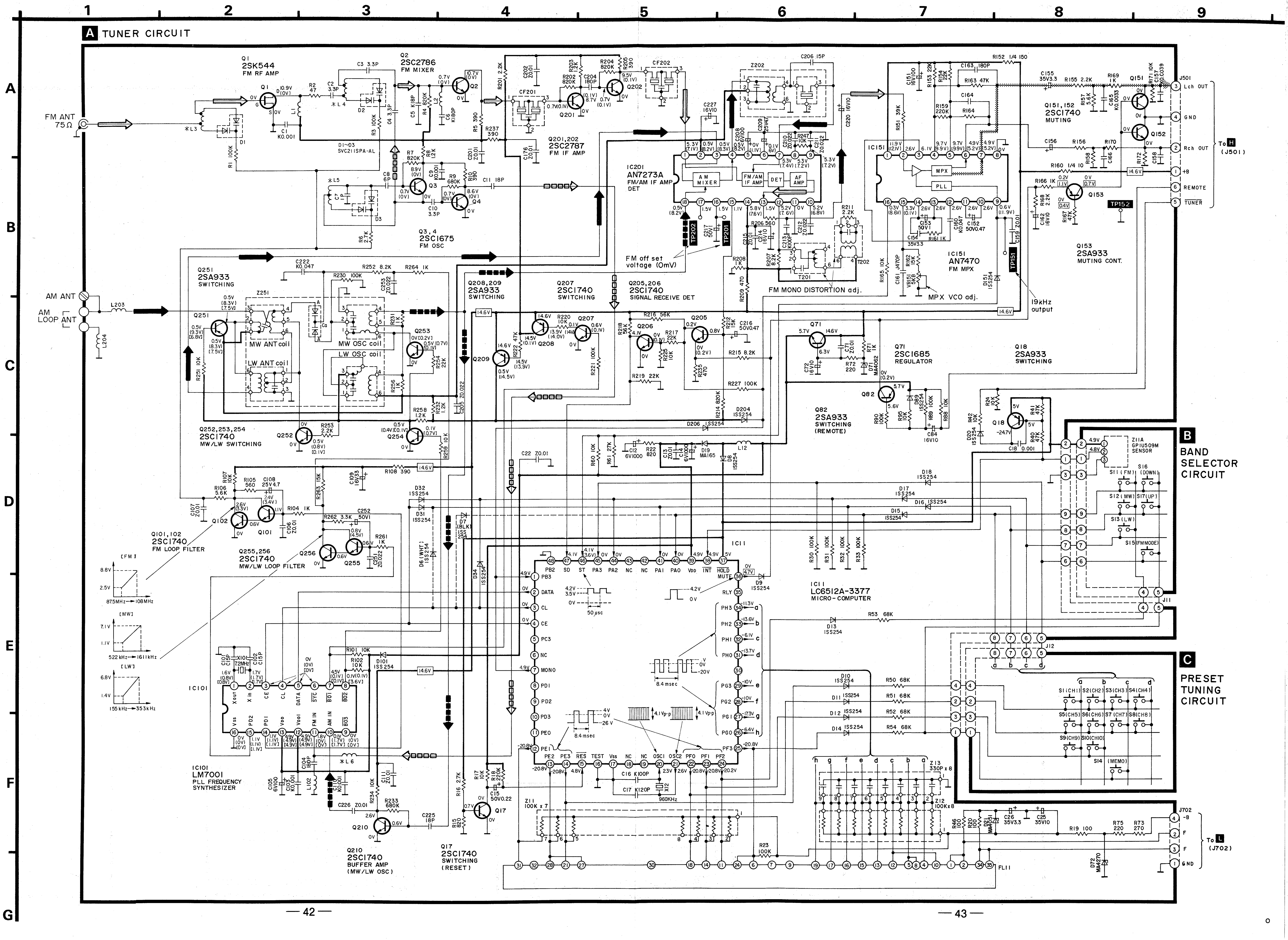
he fingers directly.

FM-IF circuit are available in
re to use the ceramics of the

e attention to the diodes (D6,
e used depending on each

D7	CENTER FREQUENCY
○	10.65 MHz
×	10.70 MHz
×	10.75 MHz

used.
not used.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6
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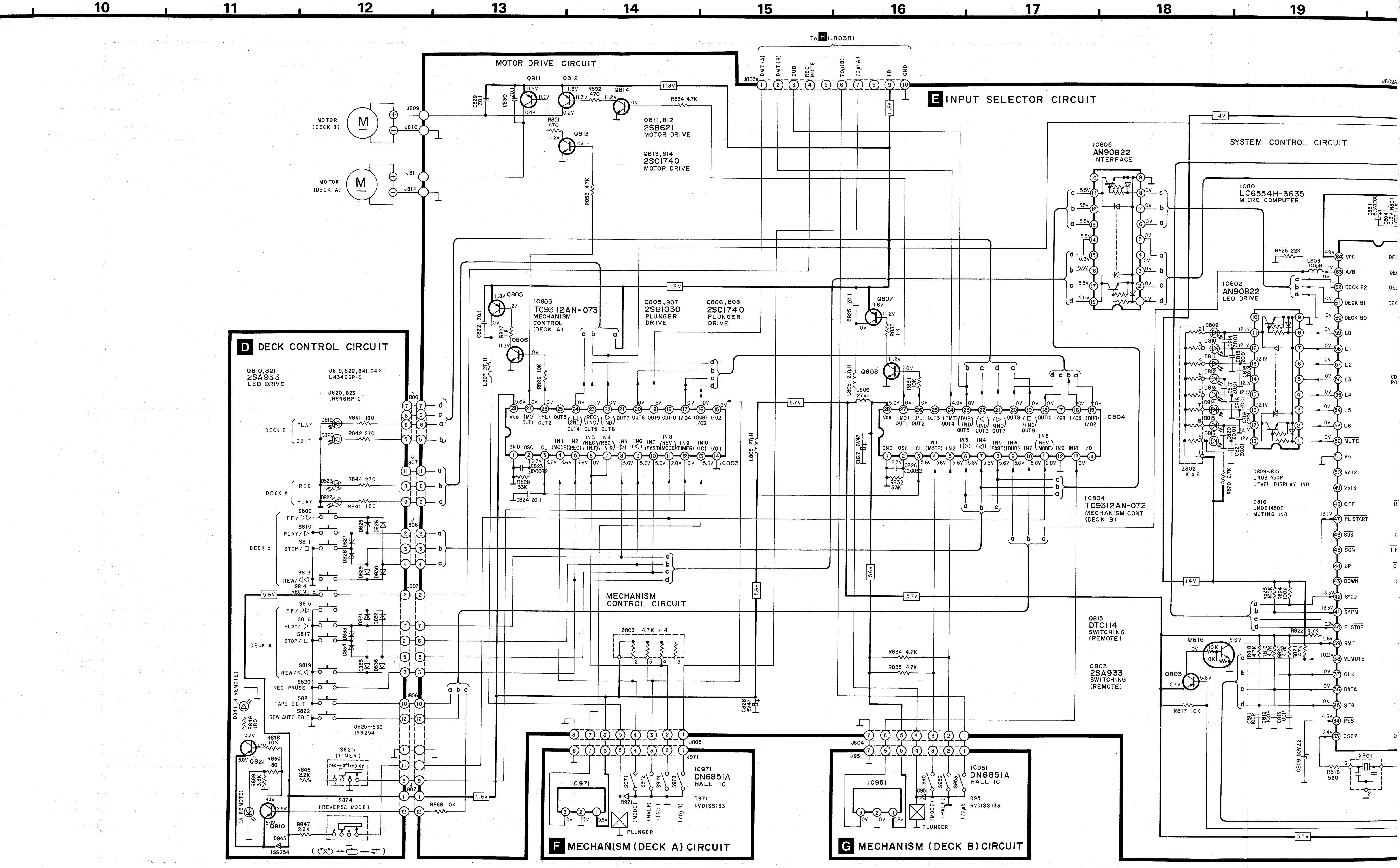
9
A
B
C
D
E
F
G
A TUNER CIRCUIT
FM ANT 75Ω
AM ANT
AM LOOP ANT
Q1 2SK544 FM RF AMP
Q2 2SC2786 FM MIXER
Q3, 4 2SC1675 FM OSC
D1~03 SVC211SPA-AL
CF201
CF202
Z202
Q201, 202 2SC2787 FM IF AMP
IC201 AN7273A FM/AM IF AMP DET
AM MIXER
FM/AM IF AMP
DET
AF AMP
TP202
TP201
FM off set voltage (OmV)
FM MONO DISTORTION adj.
T201
T202
IC151
IC151 AN7470 FM MPX
MPX
PLL
MPX VCO adj.
TP151
TP152
19kHz output
Q151, 152 2SC1740 MUTING
Q153 2SA933 MUTING CONT.
J501
Lch OUT
GND
Rch OUT
+B
REMOTE
TUNER
To H (J501)
Q251 2SA933 SWITCHING
Z251
MW ANT coil
LW ANT coil
MW OSC coil
LW OSC coil
Q253
Q252, 253, 254 2SC1740 MW/LW SWITCHING
Q208, 209 2SA933 SWITCHING
Q207 2SC1740 SWITCHING
Q205, 206 2SC1740 SIGNAL RECEIVE DET
Q71 2SC1685 REGULATOR
Q18 2SA933 SWITCHING
Q82 2SA933 SWITCHING (REMOTE)
Q101, 102 2SC1740 FM LOOP FILTER
Q255, 256 2SC1740 MW/LW LOOP FILTER
[FM]
8.8V
2.5V
87.5MHz→108MHz
[MW]
7.1V
1.1V
522 kHz→1611kHz
[LW]
6.8V
1.4V
155 kHz→353kHz
IC101
IC101 LM7001 PLL FREQUENCY SYNTHESIZER
IC11
IC11 LC6512A-3377 MICRO-COMPUTER
50μsec
8.4msec
4.1Vp-p
Q210 2SC1740 BUFFER AMP (MW/LW OSC)
Q17 2SC1740 SWITCHING (RESET)
Z11 100K x 7
Z12 100K x 8
Z13 330P x 8
FL11
B BAND SELECTOR CIRCUIT
Z11A GP1U509M SENSOR
S11 (FM)
S16 (DOWN)
S12 (MW)
S17 (UP)
S13 (LW)
S15 (FM MODE)
J11
J12
C PRESET TUNING CIRCUIT
S1 (CH1)
S2 (CH2)
S3 (CH3)
S4 (CH4)
S5 (CH5)
S6 (CH6)
S7 (CH7)
S8 (CH8)
S9 (CH9)
S10 (CH10)
S14 (MEMO)
J702
-B
F
F
GND
To L (J702)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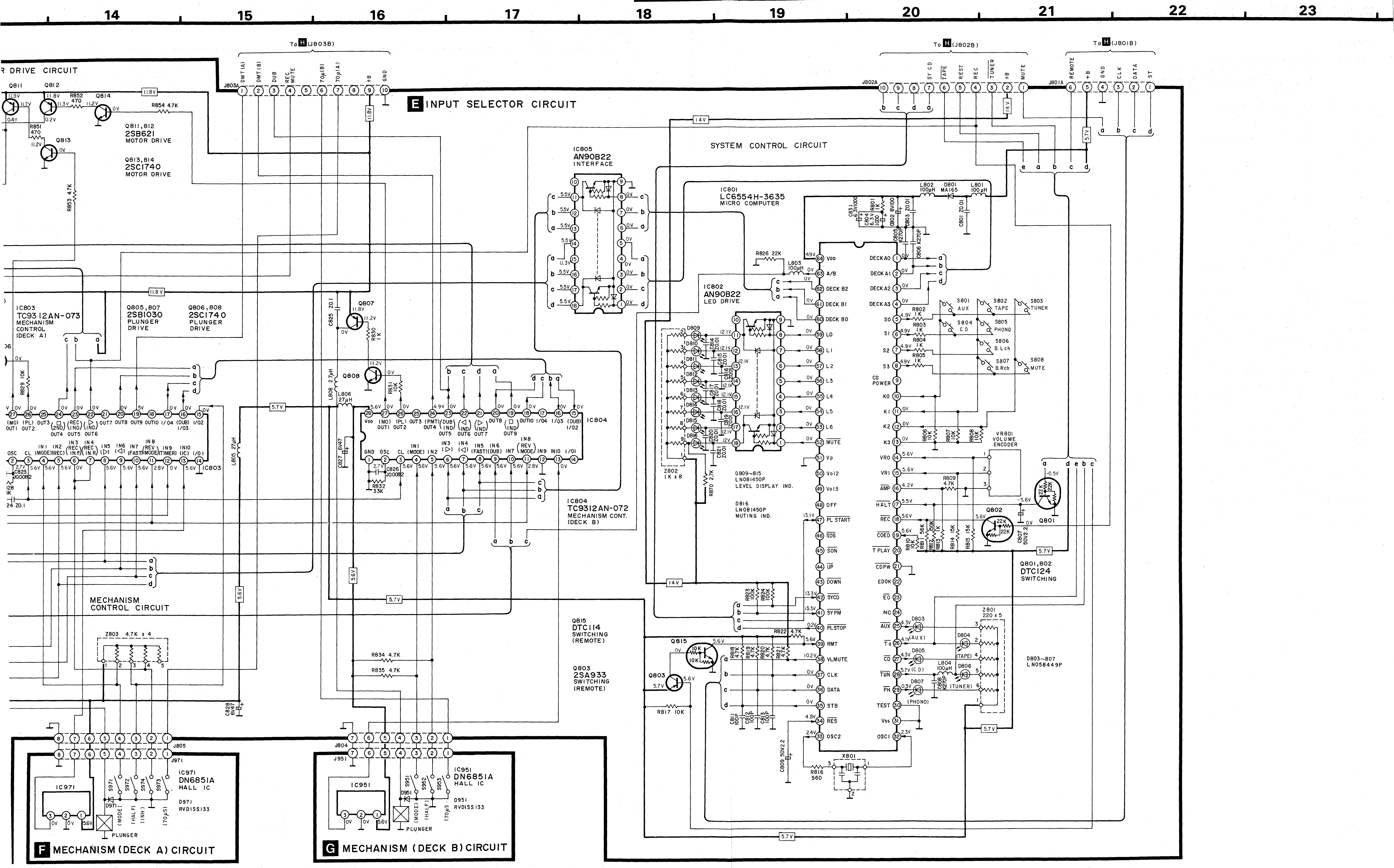
MOTOR DRIVE CIRCUIT
MOTOR (DECK B)
MOTOR (DECK A)
Q811,812
2SB621
MOTOR DRIVE
Q813,814
2SC1740
MOTOR DRIVE
To H (J803B)
DMT(A)
DMT(B)
DUB
REC MUTE
70μ(B)
70μ(A)
+8
GND
J803A
E INPUT SELECTOR CIRCUIT
SYSTEM CONTROL CIRCUIT
IC805
AN90B22
INTERFACE
IC801
LC6554H-3635
MICRO COMPUTER
IC802
AN90B22
LED DRIVE
IC803
TC9312AN-073
MECHANISM CONTROL (DECK A)
Q805,807
2SB1030
PLUNGER DRIVE
Q806,808
2SC1740
PLUNGER DRIVE
IC804
TC9312AN-072
MECHANISM CONT. (DECK B)
D DECK CONTROL CIRCUIT
Q810,821
2SA933
LED DRIVE
D819,822,841,842
LN346GP-C
D820,823
LN846RP-C
DECK B
PLAY
EDIT
DECK A
REC
PLAY
FF/▷▷
PLAY/▷
STOP/□
REW/◁◁
REC MUTE
REC PAUSE
TAPE EDIT
REW AUTO EDIT
S823 (TIMER)
rec↔off↔play
S824 (REVERSE MODE)
D825~836
1SS254
D841 (B REMOTE)
(A REMOTE)
MECHANISM CONTROL CIRCUIT
Z803 4.7K x 4
D809~815
LN08I450P
LEVEL DISPLAY IND.
D816
LN08I450P
MUTING IND.
Z802
1K x 8
Q815
DTC114
SWITCHING (REMOTE)
Q803
2SA933
SWITCHING (REMOTE)
VDD
A/B
DECK B2
DECK B1
DECK B0
L0
L1
L2
L3
L4
L5
L6
MUTE
Vp
Vol2
Vol3
OFF
PL START
SDS
SON
UP
DOWN
SYCD
SYPM
PLSTOP
RMT
VLMUTE
CLK
DATA
STB
RES
OSC2
X801
IC971
DN6851A
HALL IC
D971
RVD1SS133
S971
S972
S974
S973
(MODE)
(HALF)
(INH)
(70μS)
PLUNGER
F MECHANISM (DECK A) CIRCUIT
IC951
DN6851A
HALL IC
D951
RVD1SS133
S951
S952
S953
G MECHANISM (DECK B) CIRCUIT
J805
J971
J804
J951
11.8V
14V
5.6V
5.7V


14
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18
19
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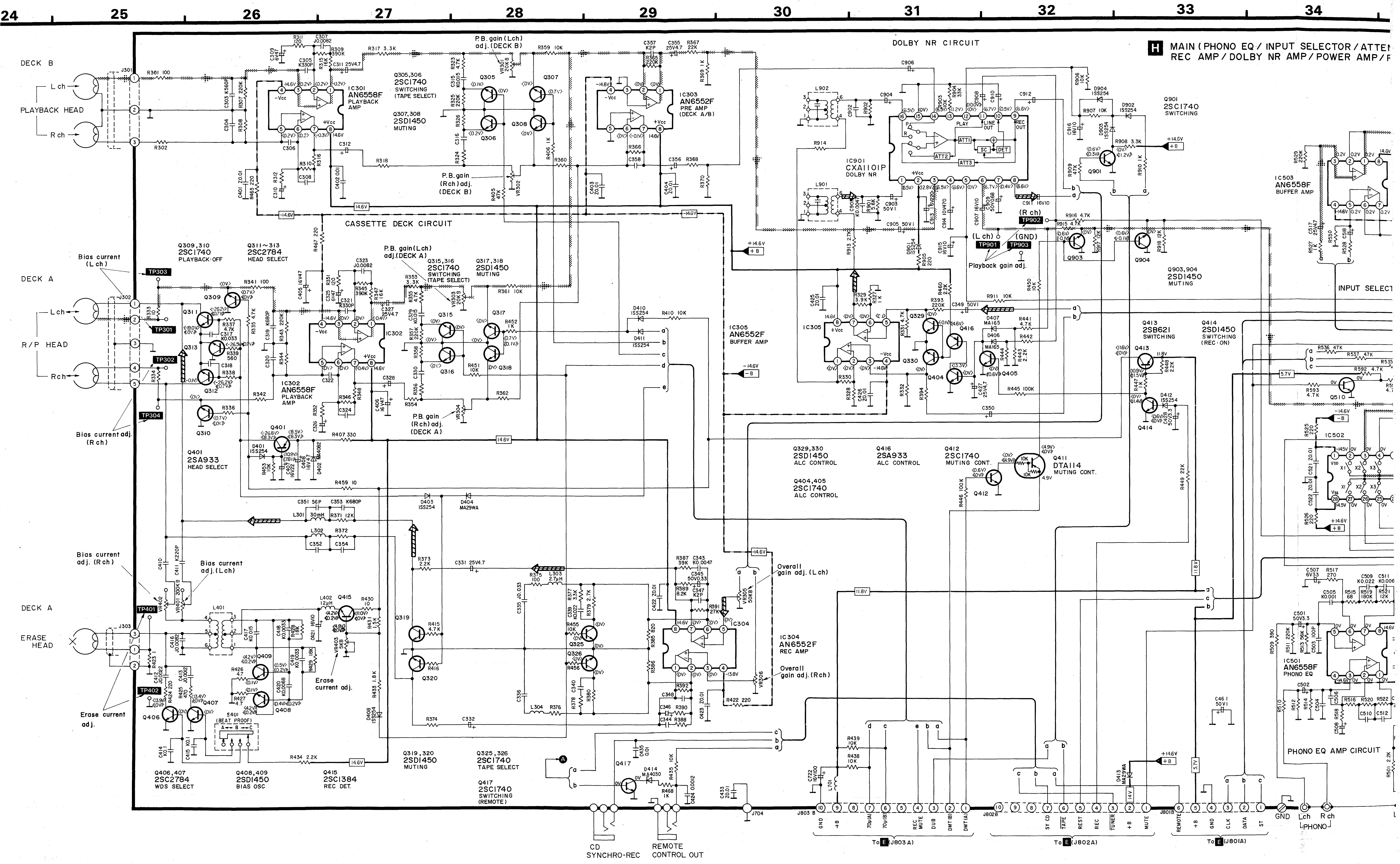
22
23
DRIVE CIRCUIT
To H (J803B)
To H (J802B)
To H (J801B)
E INPUT SELECTOR CIRCUIT
SYSTEM CONTROL CIRCUIT
Q811,812
2SB621
MOTOR DRIVE
Q813,814
2SC1740
MOTOR DRIVE
IC805
AN90B22
INTERFACE
IC801
LC6554H-3635
MICRO COMPUTER
IC802
AN90B22
LED DRIVE
IC803
TC9312AN-073
MECHANISM CONTROL (DECK A)
Q805,807
2SB1030
PLUNGER DRIVE
Q806,808
2SC1740
PLUNGER DRIVE
IC804
TC9312AN-072
MECHANISM CONT. (DECK B)
D809~815
LN081450P
LEVEL DISPLAY IND.
D816
LN081450P
MUTING IND.
Z802
1K x 8
Q801,802
DTC124
SWITCHING
VR801
VOLUME ENCODER
Z801
220 x 5
D803~807
LN05844 9P
MECHANISM CONTROL CIRCUIT
Z803 4.7K x 4
Q815
DTC114
SWITCHING (REMOTE)
Q803
2SA933
SWITCHING (REMOTE)
X801
IC971
DN6851A
HALL IC
D971
RVDISS133
IC951
DN6851A
HALL IC
D951
RVDISS133
PLUNGER
F MECHANISM (DECK A) CIRCUIT
G MECHANISM (DECK B) CIRCUIT
J803A
J802A
J801A
J805
J971
J804
J951
S801 AUX
S802 TAPE
S803 TUNER
S804 CD
S805 PHONO
S806 B.Lch
S807 B.Rch
S808 MUTE
DECK A0
DECK A1
DECK A2
DECK A3
DECK B0
DECK B1
DECK B2
VDD
A/B
MUTE
Vp
Vol2
Vol3
OFF
PL START
SDS
SON
UP
DOWN
SYCD
SYPM
PLSTOP
RMT
VLMUTE
CLK
DATA
STB
RES
OSC2
OSC1
Vss
TEST
14V
11.8V
5.7V
5.6V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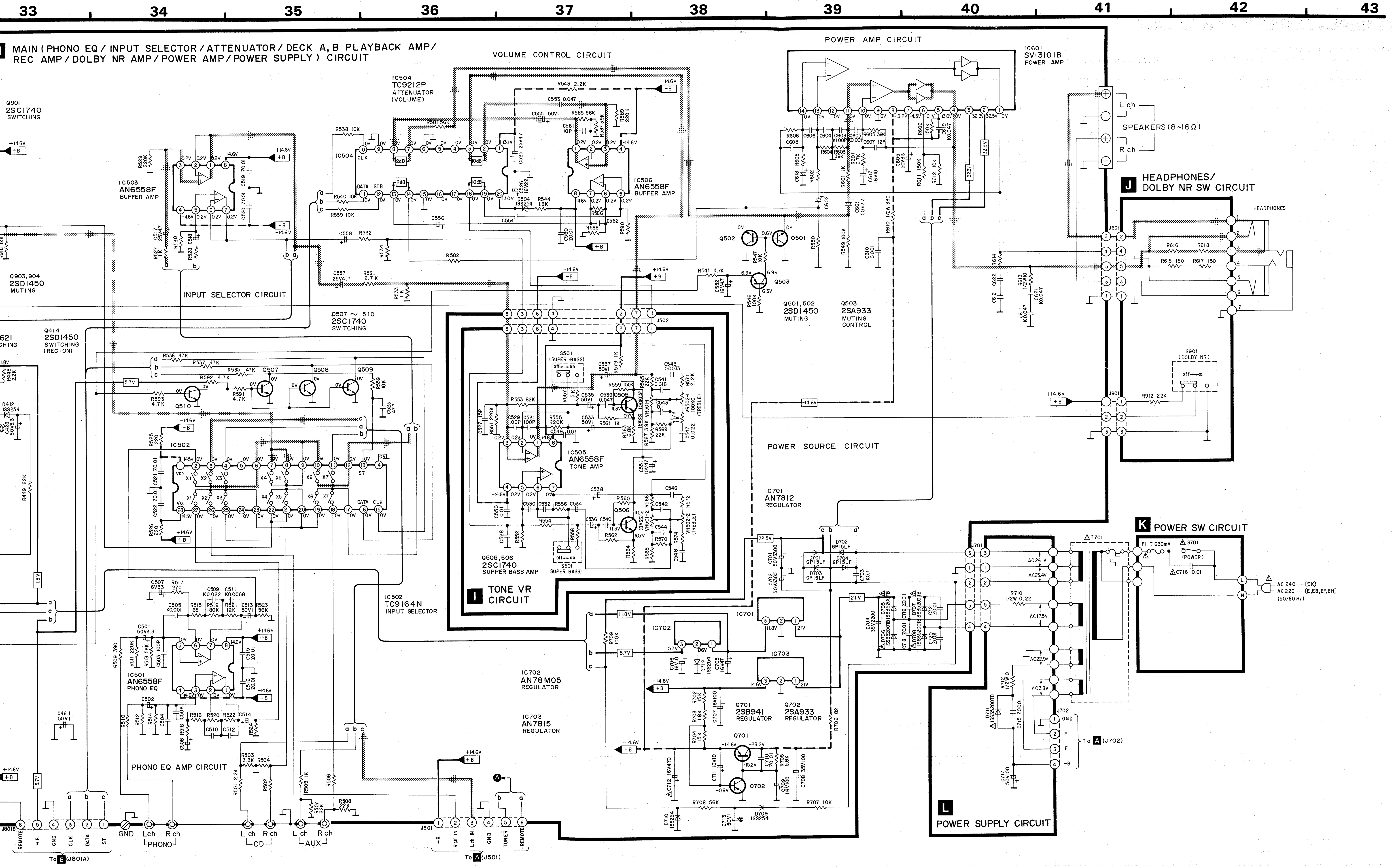
H MAIN (PHONO EQ / INPUT SELECTOR / ATTEN
REC AMP / DOLBY NR AMP / POWER AMP / F
DECK B
PLAYBACK HEAD
L ch
R ch
J301
IC301 AN6558F PLAYBACK AMP
Q305,306 2SC1740 SWITCHING (TAPE SELECT)
Q307,308 2SD1450 MUTING
P.B. gain (Lch) adj. (DECK B)
P.B. gain (Rch) adj. (DECK B)
IC303 AN6552F PRE AMP (DECK A/B)
CASSETTE DECK CIRCUIT
DOLBY NR CIRCUIT
IC901 CXA1101P DOLBY NR
PLAY
LINE OUT
REC OUT
ATT1
ATT2
ATT3
SC
DET
Q901 2SC1740 SWITCHING
TP902
(R ch)
(L ch)
(GND)
TP901
TP903
Playback gain adj.
Q903,904 2SD1450 MUTING
IC503 AN6558F BUFFER AMP
INPUT SELECT
Bias current (L ch)
TP303
DECK A
R/P HEAD
TP301
TP302
TP304
Bias current adj. (R ch)
Q309,310 2SC1740 PLAYBACK·OFF
Q311~313 2SC2784 HEAD SELECT
IC302 AN6558F PLAYBACK AMP
P.B. gain (Lch) adj. (DECK A)
Q315,316 2SC1740 SWITCHING (TAPE SELECT)
Q317,318 2SD1450 MUTING
P.B. gain (Rch) adj. (DECK A)
IC305 AN6552F BUFFER AMP
Q401 2SA933 HEAD SELECT
Q329,330 2SD1450 ALC CONTROL
Q404,405 2SC1740 ALC CONTROL
Q416 2SA933 ALC CONTROL
Q412 2SC1740 MUTING CONT.
Q411 DTA114 MUTING CONT.
Q413 2SB621 SWITCHING
Q414 2SD1450 SWITCHING (REC·ON)
IC502
IC501 AN6558F PHONO EQ
PHONO EQ AMP CIRCUIT
Bias current adj. (Rch)
Bias current adj. (Lch)
ERASE HEAD
TP401
TP402
Erase current adj.
Erase current adj.
S401 (BEAT PROOF)
IC304 AN6552F REC AMP
Overall gain adj. (Lch)
Overall gain adj. (Rch)
Q406,407 2SC2784 WDS SELECT
Q408,409 2SD1450 BIAS OSC
Q415 2SC1384 REC DET.
Q319,320 2SD1450 MUTING
Q325,326 2SC1740 TAPE SELECT
Q417 2SC1740 SWITCHING (REMOTE)
J704
CD SYNCHRO-REC
REMOTE CONTROL OUT
J803B
GND
+B
70μ(A)
70μ(B)
REC MUTE
DUB
DMT(B)
DMT(A)
To E (J803A)
J802B
SY CD
TAPE
REST
REC
TUNER
+B
MUTE
To E (J802A)
J801B
REMOTE
+B
GND
CLK
DATA
ST
To E (J801A)
GND
Lch
Rch
PHONO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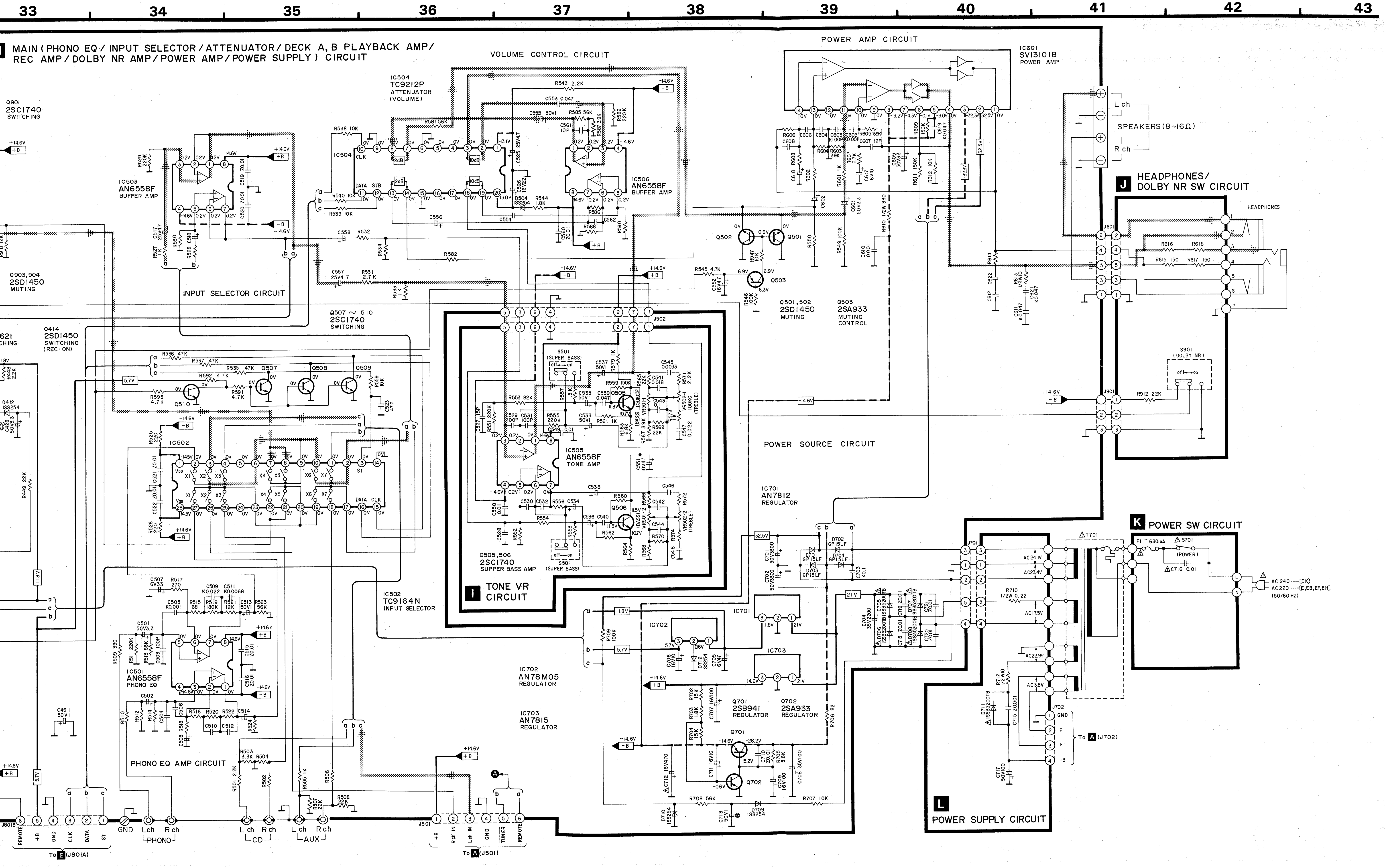
MAIN (PHONO EQ / INPUT SELECTOR / ATTENUATOR / DECK A, B PLAYBACK AMP / REC AMP / DOLBY NR AMP / POWER AMP / POWER SUPPLY) CIRCUIT
VOLUME CONTROL CIRCUIT
POWER AMP CIRCUIT
IC601 SVI3101B POWER AMP
Q901 2SC1740 SWITCHING
IC503 AN6558F BUFFER AMP
IC504 TC9212P ATTENUATOR (VOLUME)
IC506 AN6558F BUFFER AMP
Q903,904 2SD1450 MUTING
INPUT SELECTOR CIRCUIT
Q507 ~ 510 2SC1740 SWITCHING
Q414 2SD1450 SWITCHING (REC·ON)
IC502
IC505 AN6558F TONE AMP
S501 (SUPER BASS)
Q505,506 2SC1740 SUPER BASS AMP
I TONE VR CIRCUIT
IC502 TC9164N INPUT SELECTOR
IC501 AN6558F PHONO EQ
PHONO EQ AMP CIRCUIT
Q502
Q501
Q503
Q501,502 2SD1450 MUTING
Q503 2SA933 MUTING CONTROL
SPEAKERS (8~16Ω)
L ch
R ch
J HEADPHONES/ DOLBY NR SW CIRCUIT
HEADPHONES
S901 (DOLBY NR)
POWER SOURCE CIRCUIT
IC701 AN7812 REGULATOR
IC702 AN78M05 REGULATOR
IC703 AN7815 REGULATOR
Q701 2SB941 REGULATOR
Q702 2SA933 REGULATOR
K POWER SW CIRCUIT
F1 T 630mA
S701 (POWER)
C716 0.01
AC 240 ---- (EK)
AC 220 ---- (E,EB,EF,EH)
(50/60 Hz)
T701
L POWER SUPPLY CIRCUIT
J702
To A (J702)
J801B
REMOTE
+B
GND
CLK
DATA
ST
To E (J801A)
GND
L ch
R ch
PHONO
CD
AUX
J501
Rch IN
Lch IN
TUNER
To A (J501)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MAIN (PHONO EQ / INPUT SELECTOR / ATTENUATOR / DECK A,B PLAYBACK AMP / REC AMP / DOLBY NR AMP / POWER AMP / POWER SUPPLY) CIRCUIT
VOLUME CONTROL CIRCUIT
POWER AMP CIRCUIT
IC601 SVI3101B POWER AMP
Q901 2SC1740 SWITCHING
IC503 AN6558F BUFFER AMP
IC504 TC9212P ATTENUATOR (VOLUME)
IC506 AN6558F BUFFER AMP
INPUT SELECTOR CIRCUIT
Q903,904 2SD1450 MUTING
Q507 ~ 510 2SC1740 SWITCHING
Q414 2SD1450 SWITCHING (REC·ON)
Q501,502 2SD1450 MUTING
Q503 2SA933 MUTING CONTROL
Q502
Q501
Q503
L ch
R ch
SPEAKERS (8~16Ω)
HEADPHONES / DOLBY NR SW CIRCUIT
HEADPHONES
S901 (DOLBY NR)
S501 (SUPER BASS)
IC505 AN6558F TONE AMP
Q505,506 2SC1740 SUPER BASS AMP
TONE VR CIRCUIT
VR501-1 (BASS)
VR502-1 (TREBLE)
VR501-2 (BASS)
VR502-2 (TREBLE)
IC502 TC9164N INPUT SELECTOR
IC501 AN6558F PHONO EQ
PHONO EQ AMP CIRCUIT
POWER SOURCE CIRCUIT
IC701 AN7812 REGULATOR
IC702 AN78M05 REGULATOR
IC703 AN7815 REGULATOR
Q701 2SB941 REGULATOR
Q702 2SA933 REGULATOR
POWER SW CIRCUIT
F1 T 630mA
S701 (POWER)
C716 0.01
AC 240 ---- (EK)
AC 220 ---- (E,EB,EF,EH)
(50/60 Hz)
T701
POWER SUPPLY CIRCUIT
To A (J702)
J801B
REMOTE
+B
GND
CLK
DATA
ST
To E (J801A)
GND
L ch
R ch
PHONO
CD
AUX
J501
Rch IN
Lch IN
TUNER
To A (J501)
J502
J601
J901
J701
J702
+14.6V
-14.6V
11.8V
5.7V
32.5V
-32.3V
21V

■ REPLACEMENT PARTS LIST

Notes : * Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

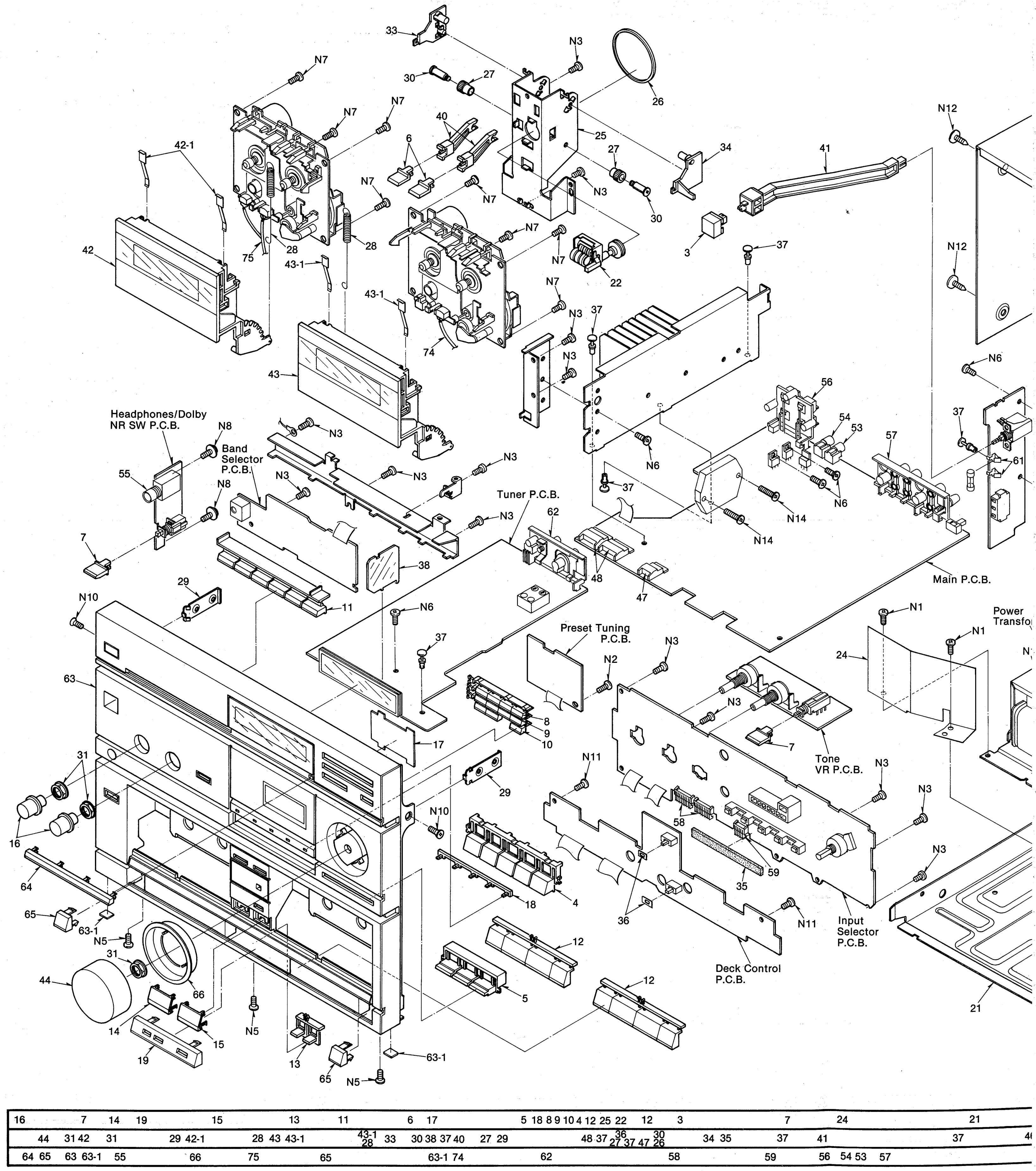
Ref. No.	Part No.	Description
CABINET AND CHASSIS		
1 ⚠ (E, EH, EB, EF)	SJA138-3	POWER CORD
1 ⚠ (EK)	SJA189	POWER CORD
2	SHR127	SPACER, POWER CORD
3	SBC666-1	BUTTON, POWER SW
4	SBC925-1C	BUTTON, SELECTOR
5	SBC926-1	BUTTON, BALANCE
6	SBC928	BUTTON, EJECT
7	SBC937	BUTTON, DOLBY
8	SBC989D	BUTTON, PRESET
9	SBC989E	BUTTON, PRESET
10	SBZ9104	BUTTON, PRESET
11	SBC1029A	BUTTON, FUNCTION
12	SBCF12A	BUTTON, CASSETTE
13	SBCF14	BUTTON, REC
14	SBC979A	BUTTON, EDIT
15	SBC979B	BUTTON, EDIT
16	SBN1235	KNOB, TONE
17	SDUF1A	FILTER
18	SGL242	ORNAMENT
19	SGXF13A	ORNAMENT
20 (EK)	SGPF10A	REAR PANEL
20 (E)	SGPF10B	REAR PANEL
20 (EH, EB, EF)	SGPF10C	REAR PANEL
21	SKUAX900L-KE	BOTTOM BOARD
21-1	SKL293	FOOT
22	SJN29	TAPE COUNTER
23	SUW3007-1	BRACKET
24	SMCF10	SHIELD COVER
25	SMQF7	BRACKET
26	SMQ20024	COUNTER BELT
27	SMQ4096	GEAR
28	SMQ60018	SPRING
29	SNEF2	ORNAMENT SCREW
30	SNE2120	NUT
31	SNE4021	NUT
32	SHE185-1	SPACER
33	SHEF1	LEVER
34	SHEF2	LEVER
35	SHGF6	RUBBER
36	SHR5312	SHEET
37	SHR9094	LATCH
38	SHR9862	HOLDER
39	SHR301	CLAMPER
40	SUBF3	CONNECTION ROD
41	SUBF4	CONNECTION ROD
42	SYEF11	CASSETTE HOLDER (A)
42-1	QBP2006A	SPRING
43	SYEF12	CASSETTE HOLDER (B)

Ref. No.	Part No.	Description
43-1	QBP2006A	SPRING
44	SBN1236	KNOB
46	SKCAX900L-KE	CABINET BODY
47	SJS50680WL	CONNECTOR
48	SJS51080WL	CONNECTOR
49	SJTD313	TERMINAL
49	SJTD513	TERMINAL PLATE
50	SJT3513	CONNECTOR(5P)
51	SJT30344-H	SOCKET
51	SJT30541LX-H	TERMINAL PLATE
52	SJT30443-V	CONNECTOR(4P)
52	SJT30643-V	CONNECTOR(6P)
52	SJT30740LX-V	CONNECTOR(7P)
52	SJT30843-V	CONNECTOR(8P)
52	SJT30940LX-V	CONNECTOR(9P)
53	SJJ141	M3 JACK, CD
54	SJJ141-1	JACK, REMOTE CONT. OUT
55	SJJ63E	JACK, HEADPHONE
56	SJF5404	TERMINAL PLATE
57	SJF3062-16N	TERMINAL PLATE
58	SJT31047WL	CONNECTOR
59	SJT30647WL	CONNECTOR
60	SJSD1205	CONNECTOR
61	SJT388	FUSE HOLDER
62	SJF8305N-1	TERMINAL
63	SGYAX900L-KE	FRONT PANEL ASS'Y
63-1	SKL293	FOOT
64	SGX7971A	ORNAMENT
65	SGXF11	ORNAMENT
66	SGXF12	ORNAMENT
67	SJS5529	SOCKET(5P)
68	SJS5523	SOCKET(5P)
69	SJT783	CONTACT
70	SJT785	CONTACT
71	SJT3511	CONNECTOR(5P)
72	SJS50372PH	CONNECTOR
72	SJS50572PH	CONNECTOR
73	SJT797	LUG TERMINAL
74	SWKAX900EKB1	CORD (B)
75	SWKAX900EKA1	CORD (A)
SCREWS.WASHERS AND NUTS		
N1	XTB3+6F	SCREW
N2	XTB3+8G	SCREW
N3	XTB3+10G	SCREW
N4	XTB3+10GFZ	SCREW
N5	XTB3+8J	SCREW
N6	XTB3+10J	SCREW
N8	XTB3+10JFR	SCREW
N8	XTWS3+10Q	SCREW
N9	XTW3+12TFZ	SCREW
N10	XTS3+8F	SCREW
N11	XTS3+10G	TAPPING SCREW
N12	SNE2095-5	SCREW
N13	XTW3+12TFZ	SCREW
N14	XTB3+16J	SCREW

Ref. No.	Part No.	Description
PACKING MATERIAL		
P1	SPHF3	PACKING SHEET
P2	XZB70X70C02	POLYETHYLENE BAG
P3 (E, EB, EH, EK)	SPGF17	PACKING CASE
P3 (EF)	SPGF19	PACKING CASE
P4	SPS4946-2	PAD
P5	SPS4947-2	PAD
P6	SPS4948	PAD
P7	SPS4949-1	PAD
P8	SPSF23	PAD

Ref. No.	Part No.	Description
ACCESSORIES		
A1	SSA270M	FM ANTENNA
A2	SPB1140T	ANTENA RUP
A3 ⚠ (EK)	SJP9009	PLUG
A4 (EK)	SQFF27	INSTRUCTION BOOK
A4 (E, EB, EH)	SQFF28	INSTRUCTION BOOK
A4 (EF)	SQFF33	INSTRUCTION BOOK
A5	UM-4NEP-2S	BATTERY

■ CABINET PARTS LOCATION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N3
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N7
22
N12
N7
43-1
N3
37
74
43
N3
N6
Headphones/Dolby NR SW P.C.B.
N8
Band Selector P.C.B.
N3
N3
N6
56
37
54
53
57
55
N3
N8
N3
N3
Tuner P.C.B.
37
61
62
N14
N6
7
N14
38
48
Main P.C.B.
29
47
N10
11
N6
N1
Power Transfo
37
Preset Tuning P.C.B.
N1
N3
63
N2
24
8
9
10
N3
17
7
31
Tone VR P.C.B.
N3
N11
N3
29
N10
58
16
59
N3
64
35
18
4
36
N11
Input Selector P.C.B.
65
63-1
12
N5
31
Deck Control P.C.B.
44
66
12
5
21
14
N5
15
19
13
63-1
65
N5
16 7 14 19 15 13 11 6 17 5 18 8 9 10 4 12 25 22 12 3 7 24 21
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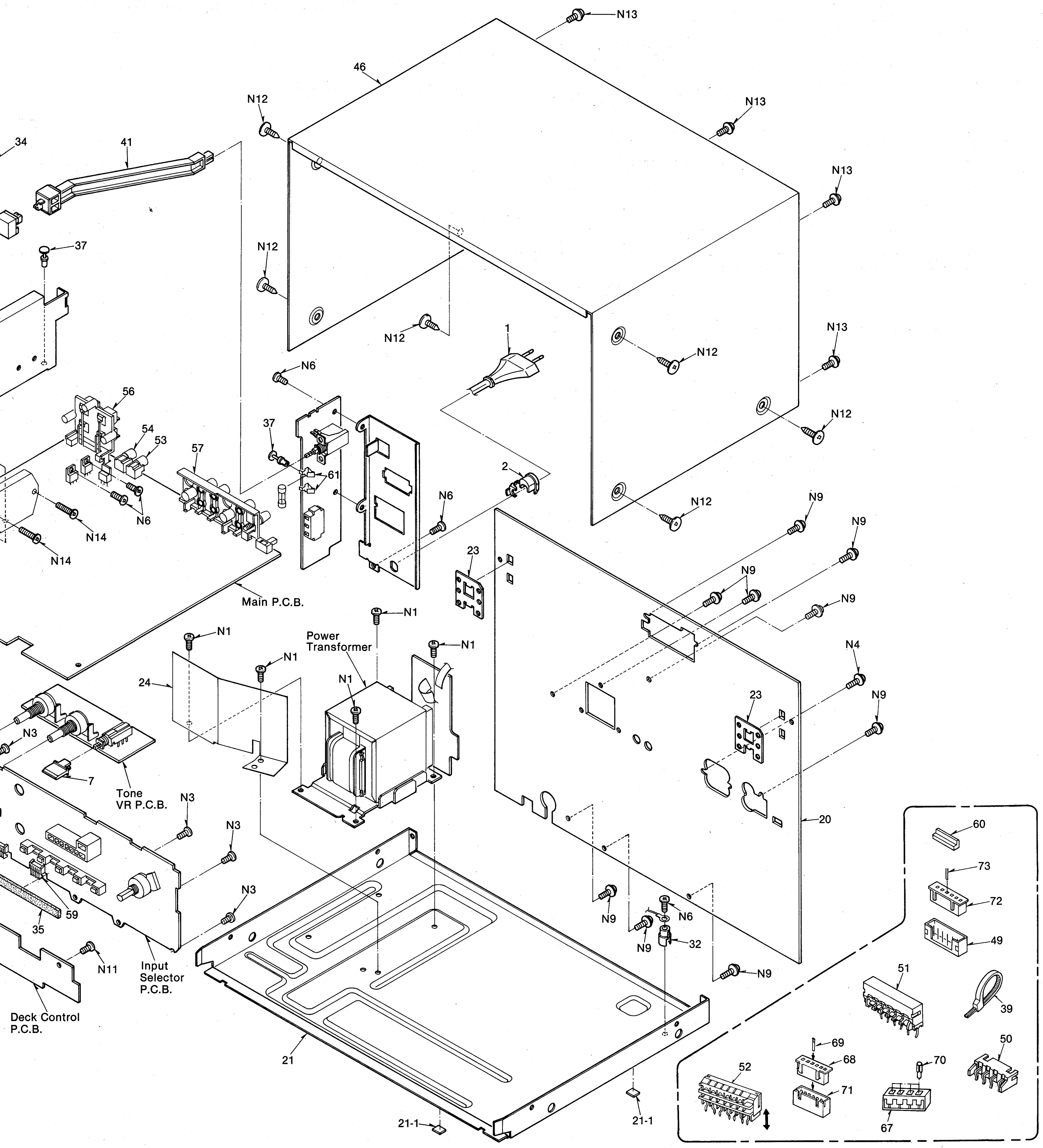
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2
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N12
N9
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N6
N14
N9
23
N9
Main P.C.B.
N9
N1
N1
Power Transformer
N1
N4
N1
24
23
N9
N3
7
Tone VR P.C.B.
N3
N3
20
60
73
72
N3
59
35
N9
N6
49
N9
32
N11
N9
Input Selector P.C.B.
51
39
Deck Control P.C.B.
50
69
21
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67
21-1
21-1

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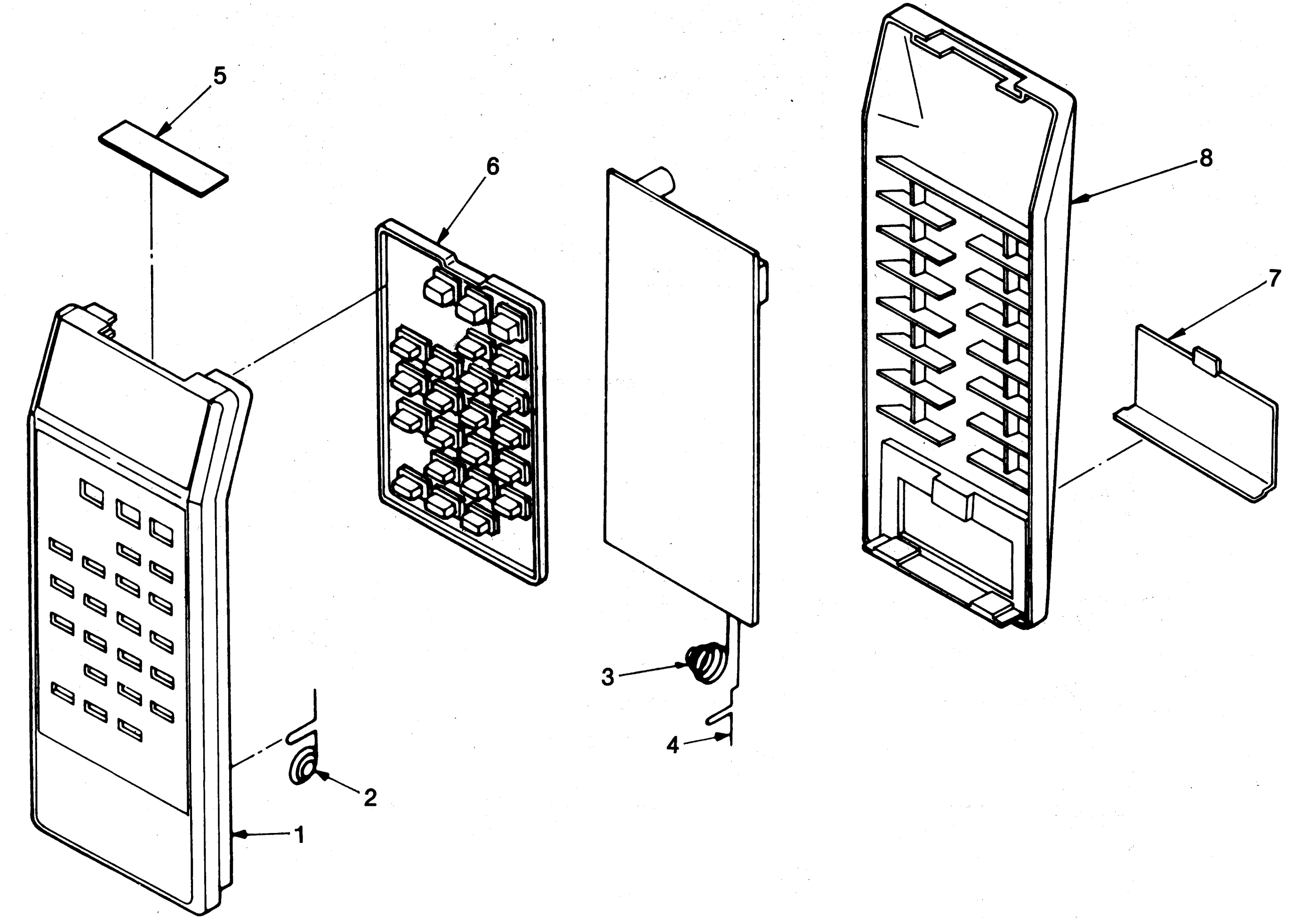
59 56 54 53 57 52 69 71 68 67 51 70 60 73 72

- **Remote-Control Transmitter**



■ REPLACEMENT PARTS LIST

Notes : ∗ Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
∗ Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.
∗ Remote Control Ass'y:
Supply period for three years from termination of production.

Ref. No.	Part No.	Description
INTEGRATED CIRCUITS		
IC1	M50467018FP	INTEGRATED CIRCUIT
TRANSISTORS		
Q1	UN1231	TRANSISTOR
DIODES		
D1	SE303AYRF	L.E.D
COIL		
L1	ELEA101JA	COIL
OSCILLATOR		
X1	CSB420PB1	OSCILLATOR
RESISTORS		
R1	ERDS2TJ1R0	CARBON, 1Ω, 1/4W
CAPACITORS		
C1	ECKD1H471KB	CERAMIC, 470PF, 50V
C2	ECKD1H121KB	CERAMIC, 120PF, 50V
C3	ECEA0GK101	ELECTROLYTIC, 100μF, 4V
MECHANISM PARTS		
1	UR64VCS569	UPPER CASE
2	UR64TD374	BATTERY TERMINAL(COMMON)
3	UR64TD813	BATTERY TERMINAL(-)
4	UR64TD812	BATTERY TERMINAL(+)
5	UR52SB327	PLATE
6	UR64CT811E	RUBBER CONTACT
7	UR64EC804	BATTERY COVER
8	UR64CS803A	LOWER CABINET
REMOTE CONTROL ASS'Y		
RC1	EUR64791	REMOTE CONTROL UNIT

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